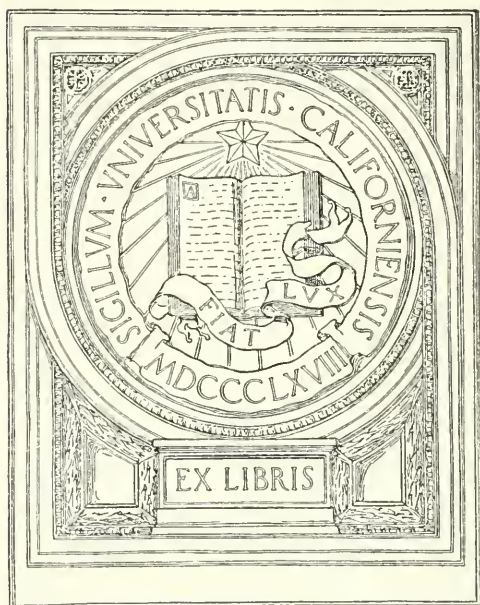
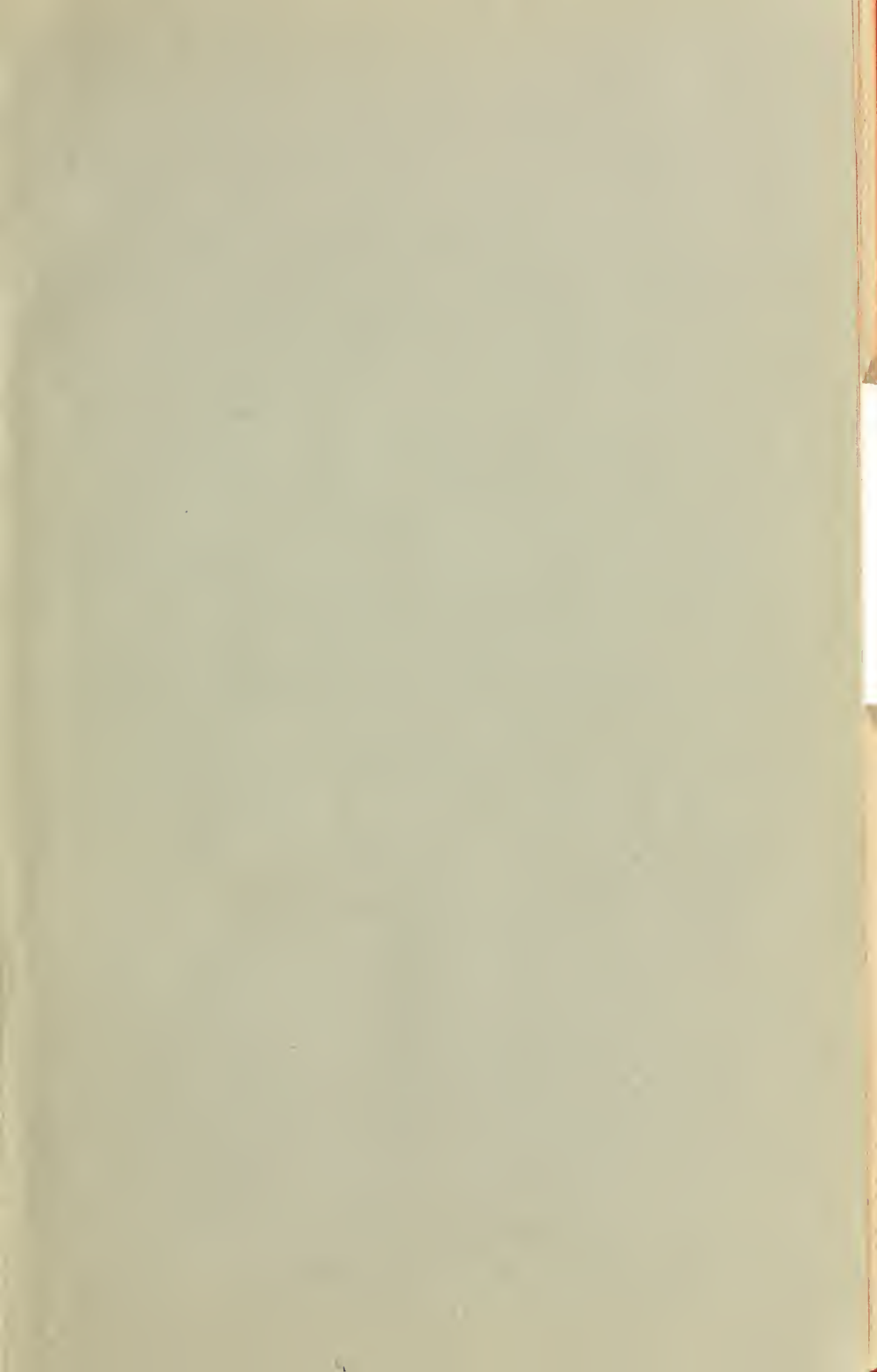


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THE THIRD YEARBOOK

OF THE

NATIONAL SOCIETY FOR THE SCIENTIFIC
STUDY OF EDUCATION

PART I

THE RELATION OF THEORY TO PRACTICE IN
THE EDUCATION OF TEACHERS



MEETINGS OF ACTIVE MEMBERS FOR THE DISCUSSION OF THESE PAPERS WILL
BE HELD AT 4:00 P.M., MONDAY, FEBRUARY 22, AND AT 2:30 P.M.,
WEDNESDAY, FEBRUARY 24, 1904, PIEDMONT
HOTEL, ATLANTA, GA.



THE THIRD YEARBOOK

OF THE

NATIONAL SOCIETY FOR THE SCIENTIFIC STUDY OF EDUCATION

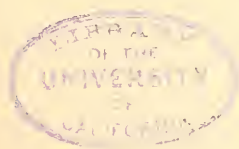
PART I

THE RELATION OF THEORY TO PRACTICE IN THE EDUCATION OF TEACHERS

(1) JOHN DEWEY; (2) SARAH C. BROOKS; (3) F. M. McMURRY, T. D. WOOD, D. E. SMITH, C. H. FARNSWORTH, G. R. RICHARDS

EDITED BY
CHARLES A. McMURRY

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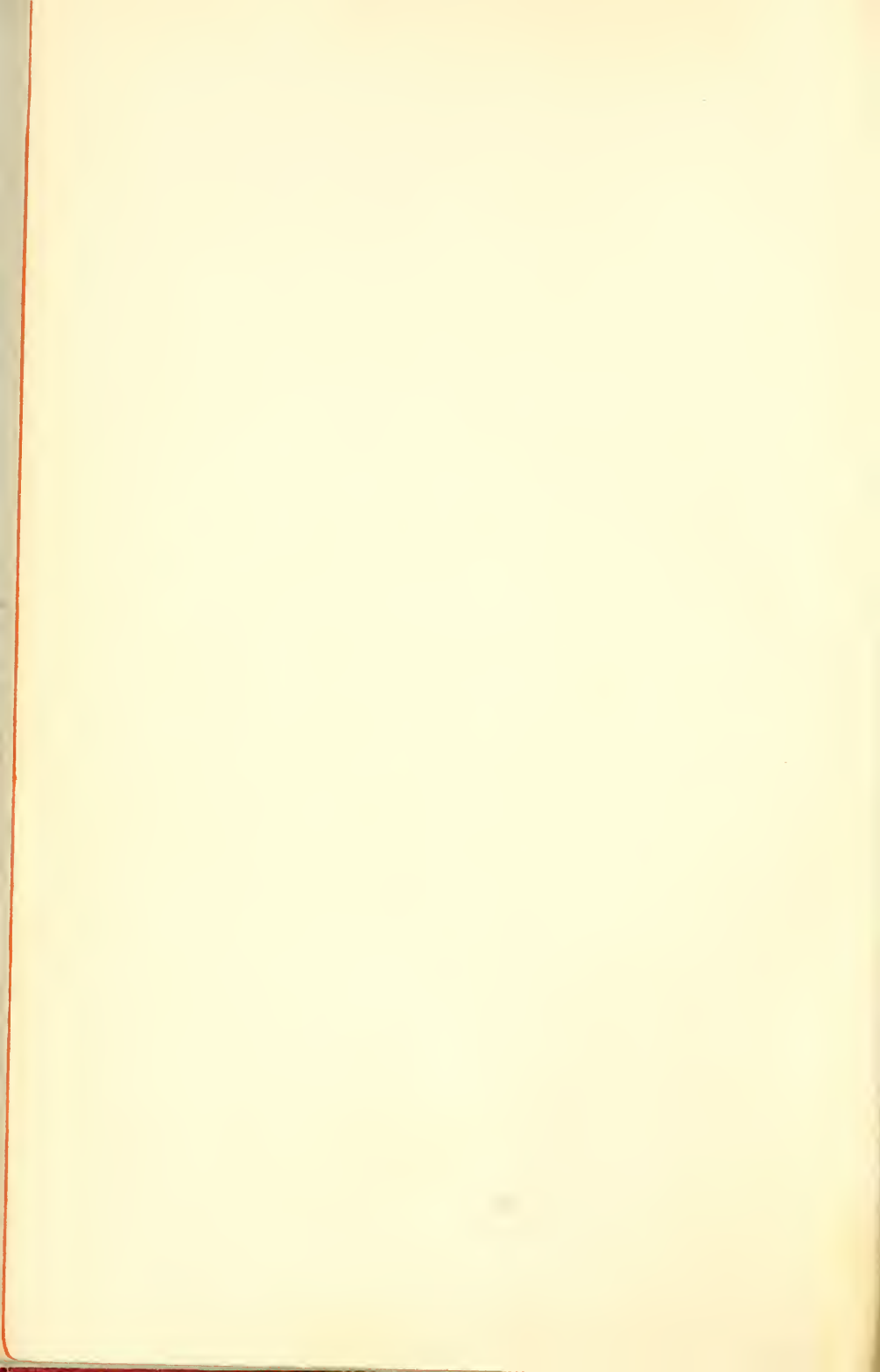
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NOTICE TO ACTIVE MEMBERS.

THERE will be two meetings at Atlanta for the discussion of these papers by active members. It is requested that the active members, as far as possible, attend these meetings and come prepared for careful discussion.

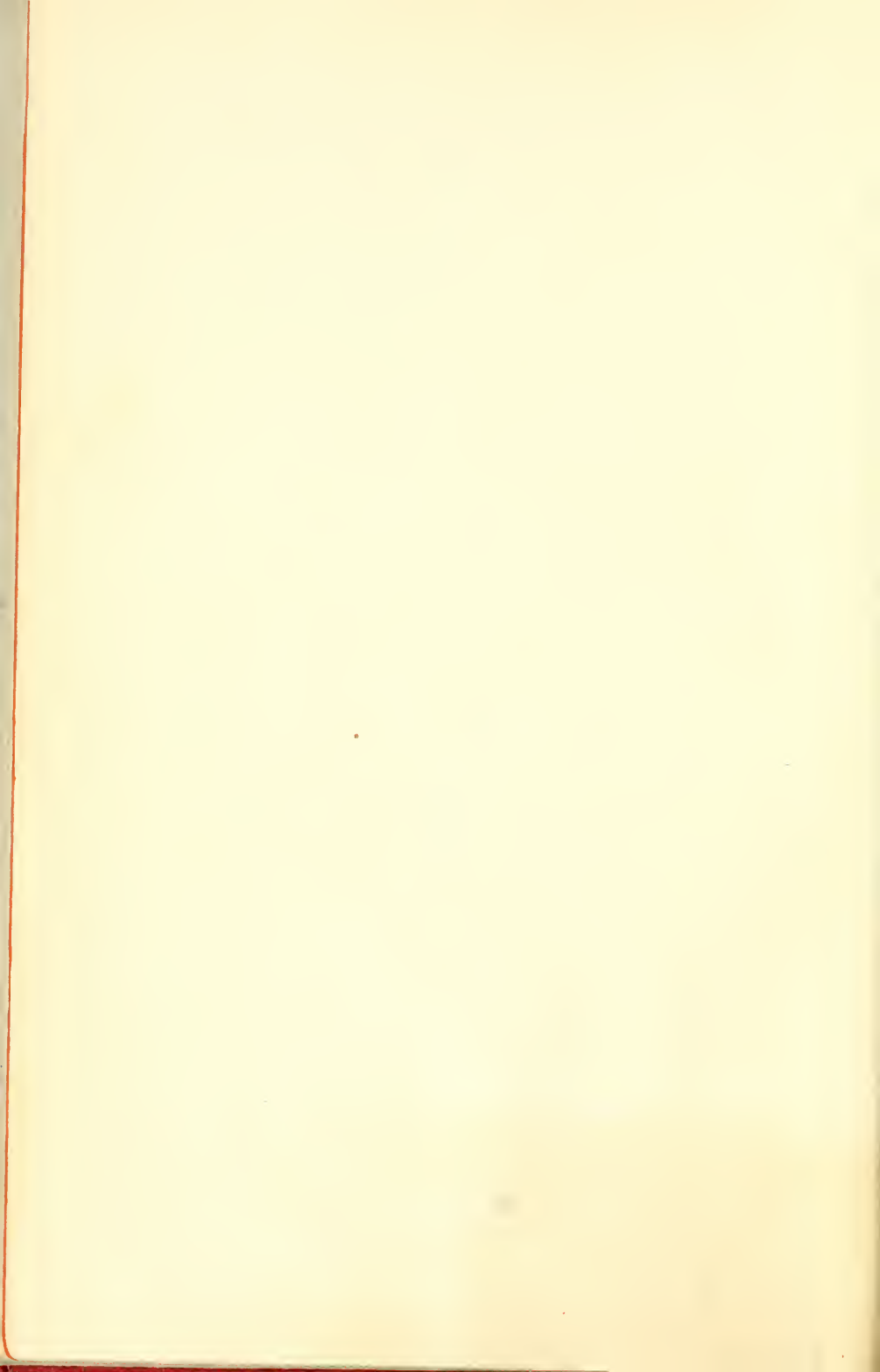
It is recommended that local round tables be organized at schools engaged in the education and training of teachers for more general and thorough discussion of this important phase of education.

Those holding such meetings can secure additional copies of the YEARBOOK, and any of the previously published YEARBOOKS of the National Herbart Society, from The University of Chicago Press, Chicago, Illinois.



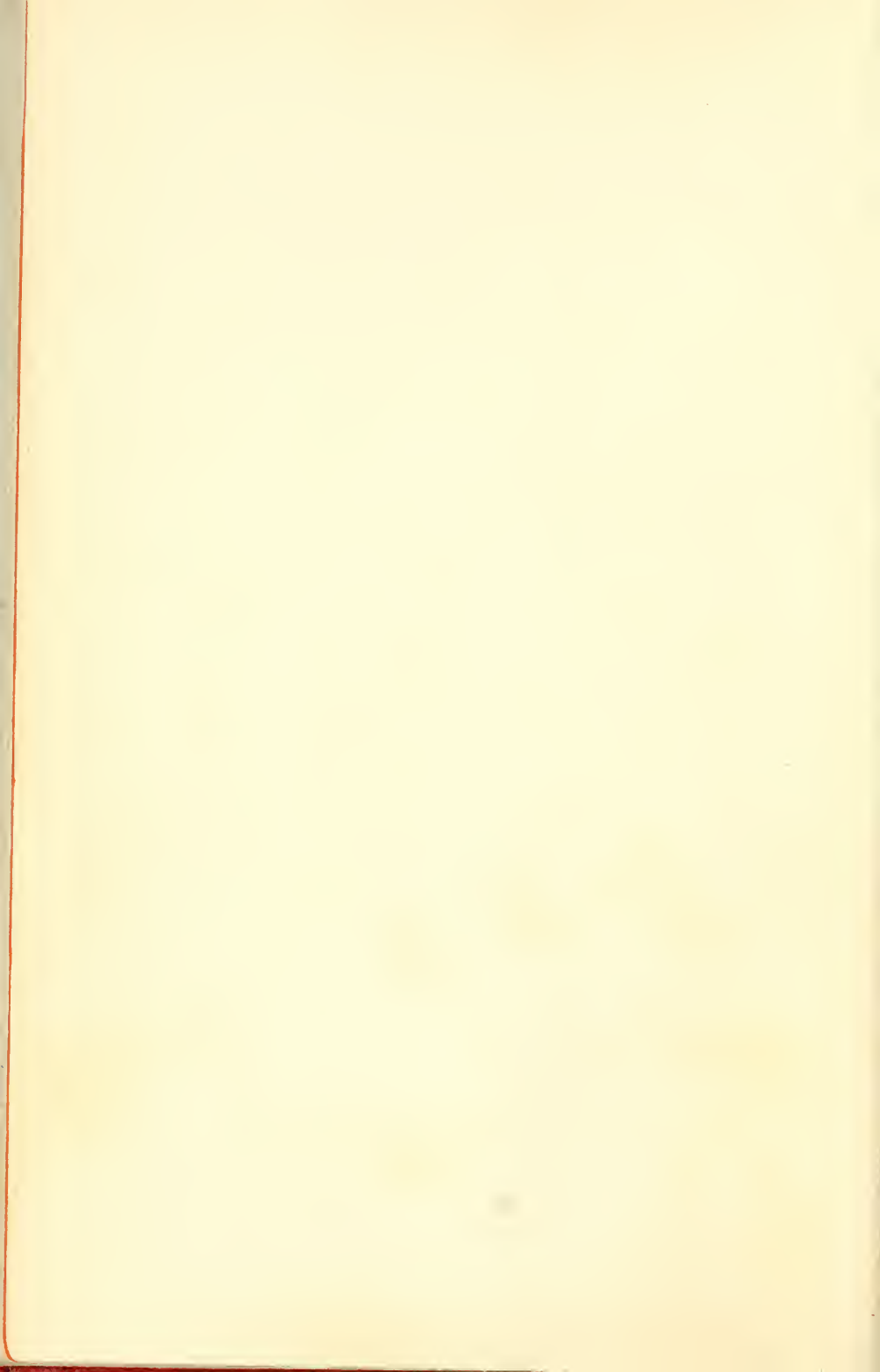
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THE THIRD YEARBOOK

THE RELATION OF THEORY TO PRACTICE IN EDUCATION.¹

JOHN DEWEY,
The University of Chicago, Chicago, Ill.

It is difficult, if not impossible, to define the proper relationship of theory and practice without a preliminary discussion, respectively, (1) of the nature and aim of theory; (2) of practice.

A. I shall assume without argument that adequate professional instruction of teachers is not exclusively theoretical, but involves a certain amount of practical work. The primary question as to the latter is the aim with which it shall be conducted. [Two controlling purposes may be entertained so different from each other as radically to alter the amount, conditions, and method of practice work. On one hand, we may carry on the practical work with the object of giving teachers in training working command of the necessary tools of their profession; control of the technique of class instruction and management; skill and proficiency in the work of teaching. With this aim in view, practice work is, as far as it goes, of the nature of apprenticeship. On the other hand, we may propose to use practice work as an instrument in making real and vital theoretical instruction; the knowledge of subject-matter and of principles of education. This is the laboratory point of view.]

The contrast between the two points of view is obvious; and the two aims together give the limiting terms within which all practice work falls. [From one point of view, the aim is to form and equip the actual teacher; the aim is immediately as well as ultimately practical. From the other point of view, the *immediate* aim, the way of

¹This paper is to be taken as representing the views of the writer, rather than those of any particular institution in an official way; for the writer thought it better to discuss certain principles that seem to him fundamental, rather than to define a system of procedure.

getting at the ultimate aim, is to supply the intellectual method and material of good workmanship, instead of making on the spot, as it were, an efficient workman. Practice work thus considered is administered primarily with reference to the intellectual reactions it incites, giving the student a better hold upon the educational significance of the subject-matter he is acquiring, and of the science, philosophy, and history of education. Of course, the *results* are not exclusive. It would be very strange if practice work in doing what the laboratory does for a student of physics or chemistry in way of securing a more vital understanding of its principles, should not at the same time insure some skill in the instruction and management of a class. It would also be peculiar if the process of acquiring such skill should not also incidentally serve to enlighten and enrich instruction in subject-matter and the theory of education. None the less, there is a fundamental difference in the conception and conduct of the practice work according as one idea or the other is dominant and the other subordinate. If the primary object of practice is acquiring skill in performing the duties of a teacher, then the amount of time given to practice work, the place at which it is introduced, the method of conducting it, of supervising, criticising, and correlating it, will differ widely from the method where the laboratory ideal prevails; and *vice versa*.

In discussing this matter, I shall try to present what I have termed the laboratory, as distinct from the apprentice idea. While I speak primarily from the standpoint of the college, I should not be frank if I did not say that I believe what I am going to say holds, *mutatis mutandis*, for the normal school as well.

I. I first adduce the example of other professional schools. I doubt whether we, as educators, keep in mind with sufficient constancy the fact that the problem of training teachers is one species of a more generic affair—that of training for professions. Our problem is akin to that of training architects, engineers, doctors, lawyers, etc. Moreover, since (shameful and incredible as it seems) the vocation of teaching is practically the last to recognize the need of specific professional preparation, there is all the more reason for teachers to try to find what they may learn from the more extensive and matured experience of other callings. If now we turn to what has happened in the history of training for other professions, we find the following marked tendencies:

1. The demand for an increased amount of scholastic attainments as a prerequisite for entering upon professional work.

2. Development of certain lines of work in the applied sciences and arts, as centers of professional work; compare, for example, the place occupied by chemistry and physiology in medical training at present, with that occupied by chairs of "practice" and of "*materia medica*" a generation ago.

3. Arrangement of the practical and quasi-professional work upon the assumption that (limits of time, etc., being taken into account) the professional school does its best for its students when it gives them typical and intensive, rather than extensive and detailed, practice. It aims, in a word, at *control of the intellectual methods* required for personal and independent mastery of practical skill, rather than at turning out at once masters of the craft. This arrangement necessarily involves considerable postponement of skill in the routine and technique of the profession, until the student, after graduation, enters upon the pursuit of his calling.

These results are all the more important to us because other professional schools mostly started from the same position which training schools for teachers have occupied. Their history shows a period in which the idea was that students ought from the start to be made as proficient as possible in practical skill. [In seeking for the motive forces which have caused professional schools to travel so steadily away from this position and toward the idea that practical work should be conducted for the sake of vitalizing and illuminating *intellectual* methods two reasons may be singled out:

a) First, the limited time at the disposal of the schools, and the consequent need of economy in its employ. It is not necessary to assume that apprenticeship is of itself a bad thing. On the contrary, it may be admitted to be a good thing; but the time which a student spends in the training school is short at the best. Since short, it is an urgent matter that it be put to its most effective use; and, relatively speaking, the wise employ of this short time is in laying scientific foundations. These cannot be adequately secured when one is doing the actual work of the profession, while professional life does afford time for acquiring and perfecting skill of the more technical sort.

b) In the second place, there is inability to furnish in the school adequate conditions for the best acquiring and using of skill. As compared with actual practice, the best that the school of law or medicine can do is to provide a somewhat remote and simulated copy of the real thing. For such schools to attempt to give the skill which

comes to those adequately prepared, insensibly and unavoidably in actual work, is the same sort of thing as for grammar schools to spend months upon months in trying to convey (usually quite unsuccessfully) that skill in commercial arithmetic which comes, under penalty of practical failure, in a few weeks in the bank or counting-house.

It may be said that the analogy does not hold good for teachers' training schools, because such institutions have model or practice departments, supplying conditions which are identical with those which the teacher has to meet in the actual pursuit of his calling. But this is true at most only in such normal schools as are organized after the Oswego pattern—schools, that is to say, where the pupil-teacher is given for a considerable period of time the entire charge of instruction and discipline in the class-room, and does not come under a room critic-teacher. In all other cases, some of the most fundamentally significant features of the real school are reduced or eliminated. Most "practice schools" are a compromise. In theory they approximate ordinary conditions. As matter of fact, the "best interests of the children" are so safeguarded and supervised that the situation approaches learning to swim without going *too* near the water.

There are many ways that do not strike one at first glance, for removing the conditions of "practice work" from those of actual teaching. Deprivation of responsibility for the discipline of the room; the continued presence of an expert ready to suggest, to take matters into his own hands; close supervision; reduction of size of group taught; etc., etc., are some of these ways. The topic of "lesson plans" will be later referred to in connection with another topic. Here they may be alluded to as constituting one of the modes in which the conditions of the practice-teacher are made unreal. The student who prepares a number of more or less set lessons; who then has those lesson plans criticised; who then has his actual teaching criticised from the standpoint of success in carrying out the prearranged plans, is in a totally different attitude from the teacher who has to build up and modify his teaching plans as he goes along from experience gained in contact with pupils.

It would be difficult to find two things more remote from each other than the development of subject-matter under such control as is supplied from actual teaching, taking effect through the teacher's own initiative and reflective criticism, and its development with an eye fixed upon the judgment, presumed and actual, of a superior super-

visory officer. Those phases of the problem of practice teaching which relate more distinctly to responsibility for the discipline of the room, or of the class, have received considerable attention in the past; but the more delicate and far-reaching matter of intellectual responsibility is too frequently ignored. Here centers the problem of securing conditions which will make practice work a genuine apprenticeship.

II. To place the emphasis upon the securing of proficiency in teaching and discipline *puts the attention of the student-teacher in the wrong place, and tends to fix it in the wrong direction*—not wrong absolutely, but relatively as regards perspective of needs and opportunities. The would-be teacher has some time or other to face and solve two problems, each extensive and serious enough by itself to demand absorbing and undivided attention. These two problems are:

1. Mastery of subject-matter from the standpoint of its educational value and use; or, what is the same thing, the mastery of educational principles in their application to that subject-matter which is at once the material of instruction and the basis of discipline and control;

2. The mastery of the technique of class management.

This does not mean that the two problems are in any way isolated or independent. On the contrary, they are strictly correlative. *But the mind of a student cannot give equal attention to both at the same time.*

The difficulties which face a beginning teacher, who is set down for the first time before a class of from thirty to sixty children, in the responsibilities not only of instruction, but of maintaining the required order in the room as a whole, are most trying. It is almost impossible for an old teacher who has acquired the requisite skill of doing two or three distinct things simultaneously—skill to see the room as a whole while hearing one individual in one class recite, of keeping the program of the day and, yes, of the week and of the month in the fringe of consciousness while the work of the hour is in its center—it is almost impossible for such a teacher to realize all the difficulties that confront the average beginner.

[There is a technique of teaching, just as there is a technique of piano-playing. The technique, if it is to be educationally effective, is dependent upon principles. But it is possible for a student to acquire outward form of method without capacity to put it to genuinely educative use.] As every teacher knows, children have an inner and an outer attention. The inner attention is the giving of the mind without

reserve or qualification to the subject in hand. It is the first-hand and personal play of mental powers. As such, it is a fundamental condition of mental growth. To be able to keep track of this mental play, to recognize the signs of its presence or absence, to know how it is initiated and maintained, how to test it by results attained, and to test *apparent* results by it, is the supreme mark and criterion of a teacher. It means insight into soul-action, ability to discriminate the genuine from the sham, and capacity to further one and discourage the other.

External attention, on the other hand, is that given to the book or teacher as an independent object. It is manifested in certain conventional postures and physical attitudes rather than in the movement of thought. Children acquire great dexterity in exhibiting in conventional and expected ways the *form* of attention to school work, while reserving the inner play of their own thoughts, images, and emotions for subjects that are more important to them, but quite irrelevant.

Now, the teacher who is plunged prematurely into the pressing and practical problem of keeping order in the schoolroom has almost of necessity to make supreme the matter of external attention. The teacher has not yet had the training which affords psychological insight—which enables him to judge promptly (and therefore almost automatically) the kind and mode of subject-matter which the pupil needs at a given moment to keep his attention moving forward effectively and healthfully. He does know, however, that he must maintain order; that he must keep the attention of the pupils fixed upon his own questions, suggestions, instructions, and remarks, and upon their “lessons.” The inherent tendency of the situation therefore is for him to acquire his technique in relation to the outward rather than the inner mode of attention.

III. Along with this fixation of attention upon the secondary at the expense of the primary problem, *there goes the formation of habits of work which have an empirical, rather than a scientific, sanction.* The student adjusts his actual methods of teaching, not to the principles which he is acquiring, but to what he sees succeed and fail in an empirical way from moment to moment: to what he sees other teachers doing who are more experienced and successful in keeping order than he is; and to the injunctions and directions given him by others. In this way the controlling habits of the teacher finally get fixed with comparatively little reference to principles in the psychology, logic, and history of education. In theory, these latter are dominant; in

practice, the moving forces are the devices and methods which are picked up through blind experimentation; through examples which are not rationalized; through precepts which are more or less arbitrary and mechanical; through advice based upon the experience of others. Here we have the explanation, in considerable part at least, of the dualism, the unconscious duplicity, which is one of the chief evils of the teaching profession. There is an enthusiastic devotion to certain principles of lofty theory in the abstract—principles of self-activity, self-control, intellectual and moral—and there is a school practice taking little heed of the official pedagogic creed. Theory and practice do not grow together out of and into the teacher's personal experience.

Ultimately there are two bases upon which the habits of a teacher as a teacher may be built up. They may be formed under the inspiration and constant criticism of intelligence, applying the best that is available. This is possible only where the would-be teacher has become fairly saturated with his subject-matter, and with his psychological and ethical philosophy of education. Only when such things have become incorporated in mental habit, have become part of the working tendencies of observation, insight, and reflection, will these principles work automatically, unconsciously, and hence promptly and effectively. And this means that practical work should be pursued primarily with reference to its reaction upon the professional pupil in making him a thoughtful and alert student of education, rather than to help him get immediate proficiency.

For immediate skill may be got at the cost of power to go on growing. The teacher who leaves the professional school with power in managing a class of children may appear to superior advantage the first day, the first week, the first month, or even the first year, as compared with some other teacher who has a much more vital command of the psychology, logic, and ethics of development. But later "progress" may with such consist only in perfecting and refining skill already possessed. Such persons seem to know how to teach, but they are not students of teaching. Even though they go on studying books of pedagogy, reading teachers' journals, attending teachers' institutes, etc., yet the root of the matter is not in them, unless they continue to be students of subject-matter, and students of mind-activity. Unless a teacher is such a student, he may continue to improve in the mechanics of school management, but he can not grow as a teacher, an inspirer and director of soul-life. How often do candid instructors in

training schools for teachers acknowledge disappointment in the later career of even their more promising candidates! They seem to strike twelve at the start. There is an unexpected and seemingly unaccountable failure to maintain steady growth. Is this in some part due to the undue premature stress laid in early practice work upon securing immediate capability in teaching?

I might go on to mention other evils which seem to me to be more or less the effect of this same cause. Among them are the lack of intellectual independence among teachers, their tendency to intellectual subserviency. The "model lesson" of the teachers' institute and of the educational journal is a monument, on the one hand, of the eagerness of those in authority to secure immediate practical results at any cost; and, upon the other, of the willingness of our teaching corps to accept without inquiry or criticism any method or device which seems to promise good results. Teachers, actual and intending, flock to those persons who give them clear-cut and definite instructions as to just how to teach this or that.

The tendency of educational development to proceed by reaction from one thing to another, to adopt for one year, or for a term or seven years, this or that new study or method of teaching, and then as abruptly to swing over to some new educational gospel, is a result which would be impossible if teachers were adequately moved by their own independent intelligence. The willingness of teachers, especially of those occupying administrative positions, to become submerged in the routine detail of their callings, to expend the bulk of their energy upon forms and rules and regulations, and reports and percentages, is another evidence of the absence of intellectual vitality. If teachers were possessed by the spirit of an abiding student of education, this spirit would find some way of breaking through the mesh and coil of circumstance and would find expression for itself.

B. Let us turn from the practical side to the theoretical. What must be the aim and spirit of theory in order that practice work may really serve the purpose of an educational laboratory? We are met here with the belief that instruction in theory is merely theoretical, abstruse, remote, and therefore relatively useless to the teacher as a teacher, unless the student is at once set upon the work of teaching; that only "practice" can give a motive to a professional learning, and supply material for educational courses. It is not infrequently claimed (or at least unconsciously assumed) that students will not have a pro-

fessional stimulus for their work in subject-matter and in educational psychology and history, will not have any outlook upon their relation to education, unless these things are immediately and simultaneously reinforced by setting the student upon the work of teaching. But is this the case? Or are there practical elements and bearings already contained in theoretical instruction of the proper sort?

I. Since it is impossible to cover in this paper all phases of the philosophy and science of education, I shall speak from the standpoint of psychology, believing that this may be taken as typical of the whole range of instruction in educational theory as such.

In the first place, beginning students have without any reference to immediate teaching a very large capital of an exceedingly practical sort in their own experience. The argument that theoretical instruction is merely abstract and in the air unless students are set at once to test and illustrate it by practice-teaching of their own, *overlooks the continuity of the class-room mental activity with that of other normal experience*. It ignores the tremendous importance for educational purposes of this continuity. Those who employ this argument seem to isolate the psychology of learning that goes on in the schoolroom from the psychology of learning found elsewhere.

This isolation is both unnecessary and harmful. It is unnecessary, tending to futility, because it throws away or makes light of the greatest asset in the student's possession—the greatest, moreover, that ever will be in his possession—his own direct and personal experience. There is every presumption (since the student is not an imbecile) that he has been learning all the days of his life, and that he is still learning from day to day. He must accordingly have in his own experience plenty of practical material by which to illustrate and vitalize theoretical principles and laws of mental growth in the process of learning. Moreover, since none of us is brought up under ideal conditions, each beginning student has plenty of practical experience by which to illustrate cases of arrested development—instances of failure and maladaptation and retrogression, or even degeneration. The material at hand is pathological as well as healthy. It serves to embody and illustrate both achievement and failure, in the problem of learning.

But it is more than a serious mistake (violating the principle of proceeding from the known to the unknown) to fail to take account of this body of practical experience. Such ignoring tends also to per-

petuate some of the greatest evils of current school methods. Just because the student's attention is not brought to the point of recognizing that *his own* past and present growth is proceeding in accordance with the very laws that control growth in the school, and that there is no psychology of the schoolroom different from that of the nursery, the playground, the street, and the parlor, he comes unconsciously to assume that education in the class-room is a sort of unique thing, having its own laws.¹ Unconsciously, but none the less surely, the student comes to believe in certain "methods" of learning, and hence of teaching which are somehow especially appropriate to the school—which somehow have their particular residence and application there. Hence he comes to believe in the potency for schoolroom purposes of materials, methods, and devices which it never occurs to him to trust to in his experience outside of school.

I know a teacher of teachers who is accustomed to say that when she fails to make clear to a class of teachers some point relative to children, she asks these teachers to stop thinking of their own pupils and to think of some nephew, niece, cousin, some child of whom they have acquaintance in the informalities of home life. I do not suppose any great argument is needed to prove that breach of continuity between learning within and without the school is the great cause in education of wasted power and misdirected effort. I wish rather to take advantage of this assumption (which I think will be generally accepted) to emphasize the danger of bringing the would-be teacher into an abrupt and dislocated contact with the psychology of the schoolroom—abrupt and dislocated because not prepared for by prior practice in selecting and organizing the relevant principles and data contained within the experience best known to him, his own.²

From this basis, a transition to educational psychology may be made in observation of the teaching of others—visiting classes. I should wish to note here, however, the same principle that I have mentioned as regards practice work, specifically so termed. The first observation of instruction given by model- or critic-teachers should

¹ There is where the plea for "adult" psychology has force. The person who does not know himself is not likely to know others. The adult psychology ought, however, to be just as genetic as that of childhood.

² It may avoid misapprehension if I repeat the word *experience*. It is not a *meta-physical* introspection that I have in mind, but the process of turning back upon one's own experiences, and turning them over to see how they were developed, what helped and hindered, the stimuli and the inhibitions both within and without the organism.

not be too definitely practical in aim. The student should not be observing to find out how the good teacher does it, in order to accumulate a store of methods by which he also may teach successfully. He should rather observe with reference to seeing the interaction of mind, to see how teacher and pupils react upon each other—how mind answers to mind. Observation should at first be conducted from the psychological rather than from the “practical” standpoint. If the latter is emphasized before the student has an independent command of the former, the principle of imitation is almost sure to play an exaggerated part in the observer’s future teaching, and hence at the expense of personal insight and initiative. What the student needs most at this stage of growth is ability to see what is going on in the minds of a group of persons who are in intellectual contact with one another. He needs to learn to observe psychologically—a very different thing from simply observing how a teacher gets “good results” in presenting any particular subject.

It should go without saying that the student who has acquired power in psychological observation and interpretation may finally go on to observe more technical aspects of instruction, namely, the various methods and instrumentalities used by a good teacher in giving instruction in any subject. If properly prepared for, this need not tend to produce copiers, followers of tradition and example. Such students will be able to translate the practical devices which are such an important part of the equipment of a good teacher over into their psychological equivalents; to know not merely as a matter of brute fact that they do work, but to know how and why they work. Thus he will be an independent judge and critic of their proper use and adaptation.

In the foregoing I have assumed that educational psychology is marked off from general psychology simply by the emphasis which it puts upon two factors. The first is the stress laid upon a certain end, namely, growth or development—with its counterparts, arrest and adaptation. The second is the importance attached to the social factor—to the mutual interaction of different minds with each other. It is, I think, strictly true that no educational procedure nor pedagogical maxim can be derived directly from pure psychological data. The psychological data taken without qualification (which is what I mean by their being pure) cover everything and anything that may take place in a mind. Mental arrest and decay occur according to psychological laws, just as surely as do development and progress.

We do not make practical maxims out of physics by telling persons to move according to laws of gravitation. If people move at all, they *must* move in accordance with the conditions stated by this law. Similarly, if mental operations take place at all, they *must* take place in accordance with the principles stated in correct psychological generalizations. It is superfluous and meaningless to attempt to turn these psychological principles directly into rules of teaching. But the person who knows the laws of mechanics knows the conditions of which he must take account when he wishes to reach a certain end. He knows that *if* he aims to build a bridge, he must build it in a certain way and of certain materials, or else he will not have a bridge, but a heap of rubbish. So in psychology. Given an end, say promotion of healthy growth, psychological observations and reflection put us in control of the conditions concerned in that growth. We know that if we are to get that *end*, we must do it in a certain way. It is the subordination of the psychological material to the problem of effecting growth and avoiding arrest and waste which constitutes a distinguishing mark of educational psychology.

I have spoken of the importance of the social factor as the other mark. I do not mean, of course, that general theoretical psychology ignores the existence and significance of the reaction of mind to mind—though it would be within bounds to say that till recently the social side was an unwritten chapter of psychology. I mean that considerations of the ways in which one mind responds to the stimuli which another mind is consciously or unconsciously furnishing possess a relative importance for the educator which they have not for the psychologist as such. From the teacher's standpoint, it is not too much to say that every habit which a pupil exhibits is to be regarded as a reaction to stimuli which some persons or group of persons have presented to the child. It is not too much to say that the most important thing for the teacher to consider, as regards his present relations to his pupils, is the attitudes and habits which his own modes of being, saying, and doing are fostering or discouraging in them.

Now, if these two assumptions regarding educational psychology be granted, I think it will follow as a matter of course, that only by beginning with the values and laws contained in the student's own experience of his own mental growth, and by proceeding gradually to facts connected with other persons of whom he can know little; and by

proceeding still more gradually to the attempt actually to influence the mental operations of others, can educational theory be made most effective. Only in this way can the most essential trait of the mental habit of the teacher be secured—that habit which looks upon the internal, not upon the external; which sees that the important function of the teacher is direction of the mental movement of the student, and that the mental movement must be known before it can be directed.

II. I turn now to the side of subject-matter, or scholarship, with the hope of showing that here too the material, when properly presented, is not so *merely* theoretical, remote from the practical problems of teaching, as is sometimes supposed. I recall that once a graduate student in a university made inquiries among all the leading teachers in the institution with which he was connected as to whether they had received any professional training, whether they had taken courses in pedagogy. The inquirer threw the results, which were mostly negative, into the camp of the local pedagogical club. Some may say that this proves nothing, because college teaching is proverbially poor, considered simply as teaching. Yet no one can deny that there is *some* good teaching, and some teaching of the very first order, done in colleges, and done by persons who have never had any instruction in either the theory or the practice of teaching.

This fact cannot be ignored any more than can the fact that there were good teachers before there was any such thing as pedagogy. Now, I am not arguing for not having pedagogical training—that is the last thing I want. But I claim the facts mentioned prove that scholarship *per se* may itself be a most effective tool for training and turning out good teachers. If it has accomplished so much when working unconsciously and without set intention, have we not good reason to believe that, when acquired in a training school for teachers—with the end of making teachers held definitely in view and with conscious reference to its relation to mental activity—it may prove a much more valuable pedagogical asset than we commonly consider it?

Scholastic knowledge is sometimes regarded as if it were something quite irrelevant to method. When this attitude is even unconsciously assumed, method becomes an external attachment to knowledge of subject-matter. It has to be elaborated and acquired in relative independence from subject-matter, and *then* applied.

Now the body of knowledge which constitutes the subject-matter of the student-teacher must, by the nature of the case, be organized

subject-matter. It is not a miscellaneous heap of separate scraps. Even if (as in the case of history and literature), it be not technically termed "science," it is none the less material which has been subjected to method—has been selected and arranged with reference to controlling intellectual principles. There is, therefore, method in subject-matter itself—method indeed of the highest order which the human mind has yet evolved, scientific method.

It cannot be too strongly emphasized that this scientific method is the method of mind itself.¹ The classifications, interpretations, explanations, and generalizations which make subject-matter a branch of study do not lie externally in facts apart from mind. They reflect the attitudes and workings of mind in its endeavor to bring raw material of experience to a point where it at once satisfies and stimulates the needs of active thought. Such being the case, there is something wrong in the "academic" side of professional training, if by means of it the student does not constantly get object-lessons of the finest type in the kind of mental activity which characterizes mental growth and, hence, the educative process.

It is necessary to recognize the importance for the teacher's equipment of his own habituation to superior types of method of mental operation. The more a teacher in the future is likely to have to do with elementary teaching, the more, rather than the less, necessary is such exercise. Otherwise, the current traditions of elementary work with their tendency to talk and write down to the supposed intellectual level of children, will be likely to continue. Only a teacher thoroughly trained in the higher levels of intellectual method and who thus has constantly in his own mind a sense of what adequate and genuine intellectual activity means, will be likely, in deed, not in mere word, to respect the mental integrity and force of children.

Of course, this conception will be met by the argument that the scientific organization of subject-matter, which constitutes the academic studies of the student-teacher is upon such a radically different basis from that adapted to less mature students that too much pre-occupation with scholarship of an advanced order is likely actually to get in the way of the teacher of children and youth. I do not suppose anybody would contend that teachers really can know more than is good for

¹ PROFESSOR ELLA F. YOUNG'S "Scientific Method in Education" (*University of Chicago Decennial Publications*) is a noteworthy development of this conception, to which I am much indebted.

them, but it may reasonably be argued that continuous study of a specialized sort forms mental habits likely to throw the older student out of sympathy with the type of mental impulses and habits which are found in younger persons.

Right here, however, I think normal schools and teachers' colleges have one of their greatest opportunities—an opportunity not merely as to teachers in training, but also for reforming methods of education in colleges and higher schools having nothing to do with the training of teachers. It is the business of normal schools and collegiate schools of education to present subject-matter in science, in language, in literature and the arts, in such a way that the student both sees and feels that these studies *are* significant embodiments of mental operations. He should be led to realize that they are not products of technical methods, which have been developed for the sake of the specialized branches of knowledge in which they are used, but represent fundamental mental attitudes and operations—that, indeed, particular scientific methods and classifications simply express and illustrate in their most concrete form that of which simple and common modes of thought-activity are capable when they work under satisfactory conditions.

In a word, it is the business of the “academic” instruction of future teachers to carry back subject-matter to its common psychical roots.¹ In so far as this is accomplished, the gap between the higher and the lower treatment of subject-matter, upon which the argument of the supposed objector depends, ceases to have the force which that argument assigns to it. This does not mean, of course, that exactly the same subject-matter, in the same mode of presentation, is suitable to a student in the elementary or high schools that is appropriate to the normal student. But it does mean that a mind which is habituated to viewing subject-matter from the standpoint of the function of that subject-matter in connection with *mental* responses, attitudes, and methods will be sensitive to *signs of intellectual activity* when exhibited in the child of four, or the youth of sixteen, and will be trained to a spontaneous and unconscious appreciation of the subject-matter which is fit to call out and direct mental activity.

We have here, I think, the explanation of the success of some teachers who violate every law known to and laid down by pedagogical science. They are themselves so full of the spirit of inquiry, so sensi-

¹ It is hardly necessary to refer to Dr. Harris's continued contention that normal training should give a higher view or synthesis of even the most elementary subjects.

tive to every sign of its presence and absence, that no matter what they do, nor how they do it, they succeed in awakening and inspiring like alert and intense mental activity in those with whom they come in contact.

This is not a plea for the prevalence of these irregular, inchoate methods. But I feel that I may recur to my former remark: if some teachers, by sheer plenitude of knowledge, keep by instinct in touch with the mental activity of their pupils, and accomplish so much without, and even in spite of, principles which are theoretically sound, then there must be in this same scholarship a tremendous resource when it is more consciously used—that is, employed in clear connection with psychological principles.

When I said above that schools for training teachers have here an opportunity to react favorably upon general education, I meant that no instruction in subject-matter (wherever it is given) is adequate if it leaves the student with just acquisition of certain information about external facts and laws, or even a certain facility in the intellectual manipulation of this material. It is the business of our higher schools in all lines, and not simply of our normal schools, to furnish the student with the realization that, after all, it is the human mind, trained to effective control of its natural attitudes, impulses, and responses, that is the significant thing in all science and history and art so far as these are formulated for purposes of study.

The present divorce between scholarship and method is as harmful upon one side as upon the other—as detrimental to the best interests of higher academic instruction as it is to the training of teachers. But the only way in which this divorce can be broken down is by so presenting all subject-matter, for whatever ultimate, practical, or professional purpose, that it shall be apprehended as an objective embodiment of methods of mind in its search for, and transactions with, the truth of things.

Upon the more practical side, this principle requires that, so far as students appropriate new subject-matter (thereby improving their own scholarship and realizing more consciously the nature of method), they should finally proceed to organize this same subject-matter with reference to its use in teaching others. The curriculum of the elementary and the high school constituting the “practice” or “model” school ought to stand in the closest and most organic relation to the instruction in subject-matter which is given by the teachers of the

professional school. If in any given school this is not the case, it is either because in the *training class* subject-matter is presented in an isolated way, instead of as a concrete expression of methods of mind, or else because the *practice school* is dominated by certain conventions and traditions regarding material and the methods of teaching it, and hence is not engaged in work of an adequate educational type.

As a matter of fact, as everybody knows, both of these causes contribute to the present state of things. On the one hand, inherited conditions impel the elementary school to a certain triviality and poverty of subject-matter, calling for mechanical drill, rather than for thought-activity, and the high school to a certain technical mastery of certain conventional culture subjects, taught as independent branches of the same tree of knowledge! On the other hand traditions of the different branches of science (the academic side of subject-matter) tend to subordinate the teaching in the normal school to the attainment of certain facilities, and the acquirement of certain information, both in greater or less isolation from their value as exciting and directing mental power.

The great need is convergence, concentration. Every step taken in the elementary and the high school toward intelligent introduction of more worthy and significant subject-matter, one requiring consequently for its assimilation thinking rather than "drill," must be met by a like advance step in which the mere isolated specialization of collegiate subject-matter is surrendered, and in which there is brought to conscious and interested attention its significance in expression of fundamental modes of mental activity—so fundamental as to be common to both the play of the mind upon the ordinary material of everyday experience and to the systematized material of the sciences.

III. As already suggested, this point requires that training students be exercised in making the connections between the course of study of the practice or model school, and the wider horizons of learning coming within their ken. But it is consecutive and systematic exercise in the consideration of the subject-matter of the elementary and high schools that is needed. The habit of making isolated and independent lesson plans for a few days' or weeks' instruction in a separate grade here or there not only does not answer this purpose, but is likely to be distinctly detrimental. Everything should be discouraged which tends to put the student in the attitude of snatching at the subject-matter which he is acquiring in order to see if by some hook or crook it may

be made immediately available for a lesson in this or that grade. What is needed is the habit of viewing the entire curriculum as a continuous growth, reflecting the growth of mind itself. This in turn demands, so far as I can see, consecutive and longitudinal consideration of the curriculum of the elementary and high school rather than a cross-sectional view of it. The student should be led to see that the same subject-matter in geography, nature-study, or art develops not merely day to day in a given grade, but from year to year throughout the entire movement of the school; and he should realize this before he gets much encouragement in trying to adapt subject-matter in lesson plans for this or that isolated grade.

C. If we attempt to gather together the points which have been brought out, we should have a view of practice work something like the following—though I am afraid even this formulates a scheme with more appearance of rigidity than is desirable:

At first, the practice school would be used mainly for purposes of observation. This observation, moreover, would not be for the sake of seeing how good teachers teach, or for getting "points" which may be employed in one's own teaching, but to get material for psychological observation and reflection, and some conception of the educational movement of the school as a whole.

Secondly, there would then be more intimate introduction to the lives of the children and the work of the school through the use as assistants of such students as had already got psychological insight and a good working acquaintance with educational problems. Students at this stage would not undertake much direct teaching, but would make themselves useful in helping the regular class instructor. There are multitudes of ways in which such help can be given and be of real help—that is, of use to the school, to the children, and not merely of putative value to the training student.¹ Special attention to backward children, to children who have been out of school, assisting in the care of material, in forms of hand-work, suggest some of the avenues of approach.

This kind of practical experience enables, in the third place, the future teacher to make the transition from his more psychological and theoretical insight to the observation of the more technical points of

¹This question of some real need in the practice school itself for the work done is very important in its moral influence and in assimilating the conditions of "practice work" to those of real teaching.

class teaching and management. The informality, gradualness, and familiarity of the earlier contact tend to store the mind with material which is unconsciously assimilated and organized, and thus supplies a background for work involving greater responsibility.

As a counterpart of this work in assisting, such students might well at the same time be employed in the selection and arrangement of subject-matter, as indicated in the previous discussion. Such organization would at the outset have reference to at least a group of grades, emphasizing continuous and consecutive growth. Later it might, without danger of undue narrowness, concern itself with finding supplementary materials and problems bearing upon the work in which the student is giving assistance; might elaborate material which could be used to carry the work still farther, if it were desirable; or, in case of the more advanced students, to build up a scheme of possible alternative subjects for lessons and studies.

Fourthly, as fast as students are prepared through their work of assisting for more responsible work, they could be given actual teaching to do. Upon the basis that the previous preparation has been adequate in subject-matter, in educational theory, and in the kind of observation and practice already discussed, such practice teachers should be given the maximum amount of liberty possible. They should not be too closely supervised, nor too minutely and immediately criticised upon either the matter or the method of their teaching. Students should be given to understand that they not only are *permitted* to act upon their own intellectual initiative, but that they are *expected* to do so, and that their ability to take hold of situations for themselves would be a more important factor in judging them than their following any particular set method or scheme.

Of course, there should be critical discussion with persons more expert of the work done, and of the educational results obtained. But sufficient time should be permitted to allow the practice-teacher to recover from the shocks incident to the newness of the situation, and also to get enough experience to make him capable of seeing the *fundamental* bearings of criticism upon work done. Moreover, the work of the expert or supervisor should be directed to getting the student to judge his own work critically, to find out for himself in what respects he has succeeded and in what failed, and to find the probable reasons for both failure and success, rather than to criticising him too definitely and specifically upon special features of his work.

It ought to go without saying (unfortunately, it does not in all cases) that criticism should be directed to making the professional student thoughtful about his work in the light of principles, rather than to induce in him a recognition that certain special methods are good, and certain other special methods bad. At all events, no greater travesty of real intellectual criticism can be given than to set a student to teaching a brief number of lessons, have him under inspection in practically all the time of every lesson, and then criticise him almost, if not quite, at the very end of each lesson, upon the particular way in which that particular lesson has been taught, pointing out elements of failure and of success. Such methods of criticism may be adapted to giving a training-teacher command of some of the knacks and tools of the trade, but are not calculated to develop a thoughtful and independent teacher.

Moreover, while such teaching (as already indicated) should be extensive or continuous enough to give the student time to become at home and to get a body of funded experience, it ought to be intensive in purpose rather than spread out miscellaneously. It is much more important for the teacher to assume responsibility for the consecutive development of some one topic, to get a feeling for the movement of that subject, than it is to teach a certain number (necessarily smaller in range) of lessons in a larger number of subjects. What we want, in other words, is not so much technical skill, as a realizing sense in the teacher of what the educational development of a subject means, and, in some typical case, command of a method of control, which will then serve as a standard for self-judgment in other cases.

Fifthly, if the practical conditions permit—if, that is to say, the time of the training course is sufficiently long, if the practice schools are sufficiently large to furnish the required number of children, and to afford actual demand for the work to be done—students who have gone through the stages already referred to should be ready for work of the distinctly apprenticeship type.

Nothing that I have said heretofore is to be understood as ruling out practice-teaching which is designed to give an individual mastery of the actual technique of teaching and management, provided school conditions permit it in reality and not merely in external form—provided, that is, the student has gone through a training in educational theory and history, in subject-matter, in observation, and in practice work of the laboratory type, before entering upon the latter. The

teacher must acquire his technique some time or other; and if conditions are favorable, there are some advantages in having this acquisition take place in cadetting or in something of that kind. By means of this probation, persons who are unfit for teaching may be detected and eliminated more quickly than might otherwise be the case and before their cases have become institutionalized.

Even in this distinctly apprenticeship stage, however, it is still important that the student should be given as much responsibility and initiative as he is capable of taking, and hence that supervision should not be too unremitting and intimate, and criticism not at too short range or too detailed. The advantage of this intermediate probationary period does not reside in the fact that thereby supervisory officers may turn out teachers who will perpetuate their own notions and methods, but in the inspiration and enlightenment that come through prolonged contact with mature and sympathetic persons. If the conditions in the public schools were just what they ought to be, if all superintendents and principals had the knowledge and the wisdom which they should have, and if they had time and opportunity to utilize their knowledge and their wisdom in connection with the development of the younger teachers who come to them, the value of this apprenticeship period would be reduced, I think, very largely to its serving to catch in time and to exclude persons unfitted for teaching.

In conclusion, I may say that I do not believe that the principles presented in this paper call for anything utopian. The present movement in normal schools for improvement of range and quality of subject-matter is steady and irresistible. All the better classes of normal schools are already, in effect, what are termed "junior colleges." That is, they give two years' work which is almost, and in many cases quite, of regular college grade. More and more, their instructors are persons who have had the same kind of scholarly training that is expected of teachers in colleges. Many of these institutions are already of higher grade than this; and the next decade will certainly see a marked tendency on the part of many normal schools to claim the right to give regular collegiate bachelor degrees.

The type of scholarship contemplated in this paper is thus practically assured for the near future. If two other factors co-operate with this, there is no reason why the conception of relation of theory and practice here presented should not be carried out. The second necessary factor is that the elementary and high schools, which serve as

schools of observation and practice, should represent an advanced type of education properly corresponding to the instruction in academic subject-matter and in educational theory given to the training classes. The third necessity is that work in psychology and educational theory make concrete and vital the connection between the normal instruction in subject-matter and the work of the elementary and high schools.

If it should prove impracticable to realize the conception herein set forth, it will not be, I think, because of any impossibility resident in the outward conditions, but because those in authority, both within and without the schools, believe that the true function of training schools is just to meet the needs of which people are already conscious. In this case, of course, training schools will be conducted simply with reference to perpetuating current types of educational practice, with simply incidental improvement in details.

The underlying assumption of this paper is, accordingly, that training schools for teachers do not perform their full duty in accepting and conforming to present educational standards, but that educational leadership is an indispensable part of their office. The thing needful is improvement of education, not simply by turning out teachers who can do better the things that are now necessary to do, but rather by changing the conception of what constitutes education.

RELATION OF THEORY TO PRACTICE.

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A LATCH key was given me recently, with instructions as to its use, by the lady of the house. As she inserted the key and opened the door, she said: "I don't know whether you can use this key, for it doesn't always behave. If you push it in too far, or press upon it with too much force, it will not unlock the door."

While accepting the doubtful treasure with thanks, I humbly made note of the cautions given, resolving to exercise the greatest care in its use. When that closed door stood between me and lunch, a few hours later, and I essayed to enter the house, my first efforts failed, because in my efforts to profit by instructions I neither inserted the key the required distance nor turned it with sufficient power. My preconceived notions were lacking when put to the test. Repeated experiments gave the proper adjustment at last; but with the experiments came a decided modification of my estimate of instructions given. Frequent use has made me familiar with all the aggravating peculiarities of the key, and compelled me to return to the first theory of adjustment. If turning it over to a stranger to use, I should probably give the same directions that were given me.

Now, what is the difference between the theory as held in the first case and in the second? While identical in form, the first was poor from lack of judgment in interpreting and applying; the second is enriched by experience. Between the two lie a period of doubt and uncertainty as to the value of the instruction given, and a return of confidence. The one was adopted; the other has been proved. The one was the formulation of another's experience; the latter is my own through experience.

The incident, while of no value in itself, affords a typical illustration of the relation of theory to practice in ordinary life. However efficient instruction may be, the learner is almost certain to go wrong in the application from lack of ability perfectly to interpret and apply; and much practice is necessary to bring about the proper adjustment. The more delicate the material and the nicer the adjustment, the more practice is required before skill is attained.

The key and the lock afford an illustration of the simplest form of problems, because, being mechanical contrivances and subject to fixed laws, they are more or less constant in action, even when imperfectly adjusted. Life is full of problems of a much more complicated character, for humanity is by no means a constant quantity, subject to fixed laws. Among these complicated problems is the preparation of students for the profession of teaching.

If this problem were as simple as that of the key and the lock, the practice of Dotheboys Hall would answer every purpose, and Dickens would have lived in vain. To spell "horse" and then proceed to curry him covered the theoretical and the practical in the process of becoming familiar with this branch of zoölogy at Dotheboys Hall. If nothing were necessary but a slight knowledge of the subject-matter, the incipient teacher would need only a spelling acquaintance with the subjects to be taught, and then proceed to teach. Dotheboys Hall has still its disciples; for few days pass without some query as to the value of training schools, or some suggestion, even from teachers, of the supreme and overmastering importance of practice in the preparation for teaching. Yet among intelligent students of the problem of teaching there can be no question of the immense importance of the theory.

The point of danger to the student teacher is in the inadequate time allowed for adjustment of practice and theory. There should be leisure, during the term of practice or afterward, for comparison and explanation of experiences, and a fresh inspection of general principles both of mental development and of pedagogy. If the student is turned out into the city schools before this adjustment takes place, the result is a distinct loss in two directions: first, to the schools in efficient work; and, second, to the young teacher in the time spent in helpless floundering in what too frequently proves to be a veritable slough of despond. It may be years before a professional attitude toward the work is finally attained; and many drop out of the ranks because of these early discouragements. Mark Twain says that his first lesson in piloting a boat was received on the way from New Orleans to St. Louis, and that he took the greatest pains to impress upon his mind the various sand bars, shifting currents, appearances of islands, bends of shore, and what not; but when the boat was headed down the stream everything presented such a different aspect that he had to learn the lesson the other way around. The young teacher's experience is somewhat similar to that of the gifted pilot. Fortunate for her if both

lessons are learned while she is still within the training school, where perplexities and doubts may be cleared away, and apparent contradictions are reconciled by means of sympathetic explanation and exposition.

Omitting the question of natural aptitude, the importance and elusiveness of which none will deny, it may be well to inquire into the causes which complicate the training-school problem, and to discuss ways and means of securing the most satisfactory results under the circumstances.

The first element of complication, and the element upon which all other things depend, is that of time devoted to training. Accepting students on the scholarship basis of a high-school course, the time varies, according to schools and localities, from one to two years, with a large balance on the side of a one-year course. Sometimes a two-year course includes the last year of the high school, during which time certain professional studies are pursued, or certain reviews given in preparation for the regular training-school year.

Now, if the fourth year of the high school be devoted to studies which shall prepare certain students for the training school, it is worth while to consider which branches will prove most helpful when the professional work really begins.

Proceeding by elimination, first of all, psychology and the history of education are basic professional studies of such value that no teacher of theory would be willing to have them divorced from pedagogy. The laws of presentation are ordained by the laws of mental development, and must be present at the same time in the consciousness of the student. A knowledge of the progress of educational theory and the growth and development of the course of study should be presented at the same time with, or under the same conditions as, those under which the theories of presentation are given. Psychology especially calls for an attitude of mind not at all compatible with the manifold interests, distractions, and pleasing excitements incidental to graduation year in the high school. Psychology calls for reflection, for subjective and objective study and experiment, and these require a professional atmosphere in which to thrive.

Secondly, teachers are required, more and more, to be thinkers, to reserve judgment, and encourage pupils to do so until testimony accumulates in any given case—to experiment, to observe. Nature-study is an accepted topic in our present course of study, and the teacher must have first-hand acquaintance with nature before she can present

the various phases of the subject to children. For these reasons biology is one of the most important subjects for the high-school student looking toward a professional career. The free use of a laboratory in the study of any science is a modern necessity, not only for the sake of the student, but, looking to the future, if the student hopes to become a teacher, for the sake of enlightened methods of presentation to children.

As a means of saving time in the professional year, and also of refreshing memory in preparation for pedagogical treatment, there should be a review of the elementary branches and physiology, if the latter has not been previously presented in the high-school course. A general survey of subjects at this time which were necessarily presented piecemeal through the grades, does much to unify the topics of the various subjects. This, of course, would be just as true if the reviews should be given in the training school as in the high school; but, as we shall see later, the training-school program is crowded even with the omission of elementary reviews.

Therefore, from my point of view, those subjects to be presented during the fourth year of the high school most helpful to the training are biology, physiology, and a review of the elementary branches. I would not be put upon record as limiting science to biology and physiology, for the attitude of mind induced by a right study of science is of untold value to the teacher; and consequently there is nothing more desirable than a scientific training, if I may use the term in that sense. Both physics and chemistry, studied upon the laboratory plan, are exceedingly valuable to the teacher. English literature, the languages, mathematics, are all, likewise, essential, but presupposed in a regular high-school course. I am not so sure, either, of the value of elective courses in the high school, if the young students themselves are to be the judges; for it not infrequently happens that one is led to regret the loss of the training and preparation of certain life-experiences incidental to the study of subjects excluded, by immature judgment, from the course to be pursued. But this is far afield; considering the training-school period proper, the disposition of time varies as greatly as does the amount of time given to the course in various localities. In some cases one year of consecutive work is devoted to theory and five months to practice in the ward schools under a director of practice. In other cases, after the expiration of the term of training, including practice under supervision in the practice schools, the students are required to teach four months in the ward schools without the assistance and criticism of a critic-teacher.

Still other schools, notably normal, as distinguished from the ordinary city training school, devote two full years to the course, receiving students upon a scholarship basis of high-school graduation. These schools vary in time and amount of practice afforded each student. Some devote the first year entirely to theory and observation, and the second year largely to practice. That is, each student teaches at least one hour a day, giving attention to but one subject at a time, and presenting that subject to but one grade at a time. When the term of practice, which may be five or ten weeks, expires, the student may present the same subject to another grade, or present a different subject, as the case may seem to require. At least one other normal school devotes a portion of each day of the two-year term to practice. The practice work is under the supervision of certain members of the faculty, and the plan provides that new students shall act first as assistants to older or more experienced, and later be given charge of rooms for a specified period each day. The new and inexperienced students are thus strengthened and assured by observing and assisting the work of one more experienced.

Other training schools having a one-year course, from lack of facilities, size of classes, limit of time, or other reasons, divide classes into sections, each of which, in turn, is sent to practice under expert direction. In some cases the practice is given in various ward schools in which are provided classes under the care of a critic-teacher. Sometimes the term of practice is completed in a central building housing the two branches of theory and practice. Again, part of the students practice in the central building, and part in the ward schools. This plan is due, perhaps, to lack of facilities in the central building, or it may be from the desire to scatter classes which are under the care of students, and so distribute the discomforts due to fault-finding on the part of parents. The term of practice varies from eight to twelve weeks or more, according to circumstances. For economic reasons, this division frequently necessitates sending students to practice who have had no training in theory, unless arrangements are made for two entrance periods yearly to the training school.

The next complication in the problem of training is in connection with the studies pursued by students during the time at their disposal. These studies have been suggested, in part at least, under the high-school phase of scholastic preparation for the training school. First in the list stands psychology, with both subjective and objective studies

of children. History of education, pedagogy, and school management follow in the order of importance. Pedagogy is a title which includes a number of subjects. In its first aspect, of general method, it is intimately associated with psychology. In its second aspect of special method, it deals more directly with the actual presentation of subjects in the schoolroom, and gives opportunity for much illustrative teaching. It includes nature-study, children's literature, drawing, and music, as well as the elementary branches. Some of the richest and most practical experiences of the professional term are the direct outcome of special method.

I have not found the subject of enthusiasm in any text-book which can be placed in the hands of students, but it is a fact beyond dispute that enthusiasm is one of the most important subjects considered. Like charity, one may have all the other qualities and yet, lacking enthusiasm, is nothing in the educational world. It does not appear on any program or in any course of study, yet it not only is an essential qualification of the teacher, but requires time for cultivation.

What is the least time that can be devoted with profit to these studies, provided there is one year given to professional training? What a pity, too, that in school matters, matters pertaining to the training of that which is imperishable, we must always ask for the least rather than for what is adequate !

A year is none too much for theoretical preparation ; but by keeping up steam and filling the program with recitations, instead of providing periods of alternating rest and study each day, or periods of observation of grade work, the ground can be covered in seven months. In the hurry to accomplish a necessary amount of work in a given time we frequently lose sight of the educational importance of a little leisure, and yet it is one of the essential conditions of perfect comprehension. Seven months devoted to theory leaves an aggregate of three months for practice ; and the conditions under which the practice is given have much to do with the degree of benefit accruing to the individual student. It is, therefore, exceedingly important that the practice school be so organized and situated as to afford both teachers and students the best possible conditions for work. In order to know what these conditions are, it is necessary to know the specific needs of the student.

First, in connection with a study of the theory of presentation, and later when practice begins, there is urgent need of observation of the

work of a skilled teacher. The "what" and the "how," however well presented theoretically, need the anchor of practical illustration with pupils of a given degree of advancement. Then, when students begin to teach they need to observe the work of a skilful teacher who furnishes a model by which they are enabled, in a measure, to "true" their own imperfect efforts.

Secondly, the students need direct daily contact with children while studying the laws of mental development and of the presentation of subject-matter. The period from childhood to maturity is so full and rich of experiences, so marvelous with both physical and mental development, so roseate with dreams, hopes, and aspirations, that the student of eighteen or twenty is completely out of touch, ordinarily, with children. Life has been so strenuous as to afford no time for intimate associations with the outgrown self of childhood. Consequently, the incipient teacher must now be encouraged to renew acquaintance with the past self and to observe children daily. Intelligent sympathy with the needs and tendencies of children is one of the first qualifications of the teacher; and the parent, for that matter.

Thirdly, there must be opportunity for actual practice in teaching and in the care of a room; and this work should be done under the most encouraging conditions possible to the student—necessarily subject to criticism from those who have the supervision of her work; for this is the proving-ground of the teacher; she is timid and doubtful of her own powers, as a usual thing. She is also subject to criticism of a less intelligent character from the pupils, who have been fed from the pedagogical spoon until they have grown critical even of the way it is presented, not to mention the quality of the food it contains. It is therefore important that an air of dignity and a feeling of confidence be established first of all, for the sake of both student-teacher and pupils. The slightest neglect of these precautions is unfortunate in its effects, however trivial they may seem.

The term of practice should furnish as much variety of teaching experience as possible, and also opportunity to learn something of the details of managing a room. The management of a room calls for many more qualifications than that of successfully conducting a recitation, important as we acknowledge that to be. The order of exercises for the day, change of classes, seat work, temperature of the room, discipline, make constant and insistent demands upon the teacher's time and judgment, and every detail must be settled before we pronounce the aspirant ready for regular work in the city schools.

It is therefore important that the term of practice include two phases: first, variety of teaching experience, and, second, concentration of energy in the mastery of the details in connection with the management of a room and the daily preparation of all lessons. In a period of twelve weeks, five weeks may be given to the first phase and seven to the second, apportioning the time in accordance with the demands made upon the student-teacher by the second phase. But even under the best of conditions a twelve-week period of practice is not long enough to meet the various needs of the student-teacher.

Now, in actual practice in the various training schools of the country, so far as I have been able to learn, either one phase or the other is made prominent; and in many cases one or other phase occupies the entire period. The neglect of either causes a distinct loss to the young teacher, although insuring a greater amount of proficiency in the other direction.

Take the case of a school whose course covers two years. Suppose the practice to cover a period of forty weeks, the student teaching one period daily. This would afford opportunity of presenting one subject to any one grade for another period of five weeks. In this way one subject may be presented to all grades in the practice school; or, during the same period, different subjects may be presented to the various grades, the plan varying according to conditions. The value of such an arrangement as this is apparent, acquainting the student with the various divisions of the subject-matter, and the necessary modifications in presenting these to the different grades. Unless provision is made, however, for the practice in school management, the efficiency of the plan is lessened somewhat.

Where students spend three, or even five, months quietly in one room, teaching, observing, and managing the various requirements of the day, in any one grade, they leave the practice school at the close of the period proficient in the work of that grade, and more or less settled as to convictions, according to the circumstances under which the practice was conducted. If these students can be appointed to corresponding grades in the ward schools, their experience will prove beneficial to themselves and to the city. If, however, the opposite course is pursued, the results are disastrous, because the young teacher lacks perspective. It is vain to urge that the teaching spirit is the same in all grades. That water has power to float a human body is of no particular value as a physical fact to a drowning man. Give a student

practice for three or five months in the first grade, and then appoint her to the third grade ; or give practice in the fifth, and then appoint to the first ; and you behold, usually, the floundering of a drowning man. Results are disastrous, not only so far as the work is concerned, but in a far sadder way, to the young teacher herself, in unsettling her mind regarding the value of previous instruction and experience.

Any real or apparent disparity between the principles deduced in the study of psychology and pedagogy, and their application in practice, or any lack of harmony between the departments of theory and practice, is unfortunate for the student-teacher who has little power of adjustment from lack of experience. It has much the same effect as that produced in the primary school when the home interests are ignored or slighted. A soul cannot develop steadily and perfectly without a harmonious adjustment of relations. For this reason, it is incumbent on the two departments to work together for the attainment of the one end in view. In all other matters admitting of a variety of opinion the utmost care and the utmost consideration should be exercised.

The final need of the student-teacher is that of participation in critic meetings—meetings in which there is both constructive and destructive criticism. To be of the greatest benefit, the student should meet here, not only with practice teachers, but with teachers of theory as well. The most fruitful source of discussion in these meetings, of course, is the illustrative lesson, in the process of which it has been the purpose of the teacher to show the application of some principle of pedagogy. All parties participating in the discussion after the lesson is concluded, the student begins to feel part of a whole body of seekers after truth, be that body great or small. She also sees the real meaning of criticism as applying to her own efforts. If what she does is in accordance with general principles, her work is commended ; if not, someone is ready to point out the errors and suggest a remedy, as far as possible. If she is brainy and capable, she responds to the stimulus and improves in her teaching. These meetings react in a wholesome manner upon the training teachers also. Personally I know of no greater stimulus to teaching, nor of a more wholesome check to idiosyncrasies of every kind, than this form of critic meeting.

We have determined the needs of the student-teacher, in her term of practice, to be observation of model lessons ; direct contact with children for purposes of study and of reviving past states of mind ; and actual practice in teaching which shall give variety of experience

and at the same time a knowledge of the management of some one grade or class. We have also decided that a unit of experience, so far as theory and practice are concerned, is most desirable for the student. Our next and last question concerns the manner in which all these needs may be met. What disposition shall be made of the practice? Shall it be distributed among the various ward schools under competent critic-teachers, or shall both the theory and the practice be in one building.

Distributing the practice among the various ward schools has some distinct advantages. Among these are a greater variety of working models, as afforded by the examples of the critic-teachers of the various localities, who have little opportunity to compare work, and are comparatively free from any dominating influence that might be felt if all were collected in one building and under one head.

By this arrangement, also, the training school has numerous points of contact with the city schools, thereby affording more opportunities for sharing with the city teachers whatever good may accrue to the training school from the combined study and efforts of its various members.

With only two or four practice rooms in any one locality, the discomfort of complaints of parents on account of the supposed unsatisfactory work done in critic classes is reduced to a minimum. This consideration is scarcely worth noting; for, as every experienced person knows, these classes compare most favorably, in the long run, with those taught by regular teachers. The critic-teacher, who is always selected for superior qualifications, sees to it that children do not lose in the change of student-teachers, or in the event of unsatisfactory work by the student-teachers.

The distinct disadvantages to distributed practice are these:

Isolation does away with that indefinable, but necessary, something we call a professional atmosphere, which is possible only where numbers are working together, and are in such accord with each other that unity of purpose and enthusiasm are everywhere and at all times in evidence. It is as necessary to the incipient teacher as sunshine and moisture are to the incipient tree.

Observation of grade work, except in the case of the class immediately under her charge, ceases with the term of theory. She is then confined to one set of experiences until the expiration of her period of practice. She has no opportunity to practice in the different grades,

and consequently must lose the good accruing from a broad experience in teaching. In other words, she will know but one grade or class.

Critic meetings whose distinctive feature is the illustrative lesson are an impossibility. The classes are so widely dispersed that meetings must be conducted after school, when children are no longer in the building; or, if held for the meeting, are subject to unnatural conditions, which place both themselves and the teacher at a decided disadvantage. Teachers and students are wearied with the day's work, and enthusiasm is thereby reduced to the minimum.

It may also be necessary, for reasons incidental to organization, while a mutual understanding is being established and the course of study considered, that student- and critic-teachers have separate meetings. Here the separation sometimes reacts in misunderstanding of suggestions and criticisms given when the students assemble for critic work; for it is not often possible for the critic-teacher to attend both meetings.

Supervision is rendered difficult and unsatisfactory, the more so as the schools are widely separated. While it is both the duty and the pleasure of principal and assistants to visit the critic classes, many duties make inroads upon time; and the various customs regarding general exercises, sewing, manual training, teachers' meetings, and the like, in spite of the fact that arrangements are made to prevent conflict, render a portion of the actual visits abortive. A consensus of opinion is always possible and profitable, but no one visitor feels that the results personally are in any sense commensurate with the effort put forth and the energy expended. Where it is possible to have the supervision in the care of one person, results are more satisfactory.

Last of all, there is no adequate opportunity to work out a course of study where classes are isolated. The necessity of a separate course of study for the practice school is in some cases essential to a unit of instruction for the student-teachers. Under any circumstances it must have points of contact with that of the city schools, but may vary in some essential features. Suppose a third grade to be in the hands of critic- and student-teachers. Previous to this period the regular course of study has been followed. Succeeding work will come from the same source. What foundation and what perspective has any departure in this present year from established customs? A brave effort may be put forth by all parties concerned; but here again results are not commensurate with the time and energy expended.

Where schools of both theory and practice are housed in one building there is always the danger of a deadly sameness in ideals and of practice; and danger, too, of self-satisfaction. Self-satisfaction means mental inertia, and nothing is a greater menace to progress. This may be obviated in great measure by the active co-operation of all members of the faculty. Study and independent thinking, with good-natured freedom of expression, will do wonders in keeping the spirit of originality alive; and these activities are easily encouraged.

The question of dissatisfaction of parents is met in every city supporting a training school for teachers; and, while unpleasant, it is not unanswerable nor unreconcilable.

The unified training school certainly does afford fewer points of contact with the city schools, but it may, by the very fact of its unified life, have greater richness of results and of suggestion to present to those who visit the building.

The distinct advantages of the unified school, on the other hand, are as follows:

It affords frequent and varied opportunities for observation of expert teaching.

Students are placed in direct contact with children of the various grades before beginning to teach.

They have opportunity to practice in the different grades, thus gaining variety of experience in presenting work to children of different degrees of advancement.

They have the benefit of participating in the discussions based upon illustrative lessons, and of all other phases of discussion incidental to critic meetings.

It is possible in the one-building plan to create an atmosphere conducive to growth and to unity of purpose. This condition is most essential to the right development of the young teacher.

For the same reason, a course of study for practice schools is possible from the fact that it has both foundation and perspective.

If, therefore, as I believe, the foregoing conditions are necessary in order that the best possible results may accrue to the student-teacher in her inadequate term of practice, a one-building plan is essential, under ordinary circumstances, to the harmonious and effective workings of the schools of theory and practice.

THEORY AND PRACTICE AT TEACHERS COLLEGE, COLUMBIA UNIVERSITY.

COMPLEX NATURE OF TEACHERS COLLEGE.

THE extremely complex nature of Teachers College renders any discussion of the above theme peculiarly difficult. Students may enter the college as freshmen, specialize in Education the last two years of a four-year course, and receive a B.S. degree in Education. They may then continue their studies three years longer until the degree of Ph.D. in Education is received.

The undergraduate two-year professional courses prepare students for teaching in the kindergarten, the elementary school, or the secondary school, or for teaching domestic art, domestic science, fine arts, manual training, music, or physical education, in both schools. The graduate courses allow more advanced work in any of these lines, and for the work of supervision and administration.

Thus a student may spend seven years at the college in preparation for educational work, five of which are devoted to professional study; or, in accordance with his previous training and the special line which he has chosen, he may spend only one year there. It is evident from these facts that it is very difficult to make statements that apply to all students completing a course, and to all grades of work.

COURSES IN EDUCATION VERSUS ACADEMIC OR SUBJECT-MATTER COURSES.

In the year 1902-3 there were 146 separate courses offered in Teachers College, varying from 1 to 6 hours per week, and extending over a period of either a half or a whole academic year. Fifty per cent. of all the work offered dealt with Education proper, in distinction from academic courses, although the subject-matter of nearly all of the latter was distinctly professional, as, for instance, courses on Textiles and Foods, for prospective teachers in domestic art and domestic science.

Less than half of the hours taken by students, however, were in Education. In fact, on the average, a student taking 16 hours of instruction per week chose 6 of them in Education proper and 10 in subject-matter courses. This fact shows conclusively the prevalent

conviction in the college, that knowledge of subject-matter is at least not inferior to a knowledge of method and of other educational theory in the training of teachers. And this was true in spite of the fact that of the 729 students in residence in 1902-3, 230 were college graduates, 107 had had a partial college course, and 181 were normal-, training-, or technical-school graduates, before entering Teachers College.

In addition, the amount of time spent in study per each unit of credit was probably somewhat greater in the subject-matter than in the education courses. Returns from 229 students giving their estimate of their amount of study show the average amount per each hour of credit to be 2.16 hours, the average for each hour of credit in subject-matter courses to be 2.37 hours, and that for each hour of credit in Education courses to be 1.87 hours. This may be misleading, because the time spent in practice-teaching and other practical work can with difficulty be estimated, since it usually consumes a large amount of time for only a few weeks, and it is very probable that most students omitted entirely this item from consideration. Yet these figures approximate the facts, at any rate.

DIFFERENCE BETWEEN THE ACADEMIC WORK OF TEACHERS COLLEGE
AND THAT OF NON-PROFESSIONAL COLLEGES, LIKE COLUMBIA AND
BARNARD.

1. Teachers College offers 146 courses, aggregating 328 hours, an "hour" meaning one hour a week for one year. There are, besides these, four courses (Botany 11, 13, 17, 28) given in connection with other institutions.

Of the 146 courses, 74 (50 per cent. of the total, aggregating 164 hours, also 50 per cent. of the total) are purely educational, although in the case of Kindergarten courses, Music 10, 11, Physical Education 12, 14, and Physical Science 1, 2, they are not called courses in Education.

Of the nominally academic courses a surprisingly large number are professional in fact, and are not given in non-professional colleges like Barnard and Columbia. There are 58 of these courses (81 per cent. of the nominally academic courses), and they aggregate 131 hours (81 per cent. of the number in the nominally academic courses, and 40 per cent. of the total number of hours).

The following are the courses nominally academic, but in fact professional:

Biblical Literature 1 (2 hours), taken by those who are preparing for Bible teaching.

Domestic Art 10, 12, 14, 15, 16, 17 (14 hours), taken by those who are preparing to teach domestic art.

Domestic Science 10, 11, 12, 13, 14, 15, 51 (18 hours), taken by those who are preparing to teach domestic science.

Hospital Economics 10, 12, (3 hours), taken by those who are preparing to train nurses.

English 10 (1 hour), "Folk Story," taken by elementary teachers for use with children.

Fine Arts 1, 2, 3, 4, 10, 11, 12, 13, 15, 16, 18, 19, 22, 23 (24 hours), taken by those who are preparing to teach art.

Geography 1, 2, 10 (7 hours), taken by those preparing as elementary teachers, or as special teachers of geography.

German 10 (2 hours), "Reading Educational German;" offered, as its name suggests, for the use of teachers only.

Greek 51 and *Latin* 51 (4 hours), reading courses for high-school teachers.

Manual Training 1, 10, 11, 13, 15, 17, 19, 20, 21, 23, 24, 25 (38 hours), taken by those who are preparing to teach the subject.

Mathematics 51 (2 hours), a course in the history of the subject, designed especially for high-school teachers.

Music 2, 3, 4, 12, 14 (9 hours), taken by those who are preparing to teach music in the schools; the same might well be said of music 1, included below in the purely academic list.

Nature Study 10, 12 (4 hours), taken by elementary teachers.

Physical Science 51 (2 hours), a course in the history of the subject, designed especially for high-school teachers.

While occasionally some of these courses—as, for example, Geography 10, or some of the courses in Music or the Fine Arts—are duplicated in name in some non-professional college like Columbia or Barnard, this is exceptional, and even in that case, the aims of the courses being radically different, there is only a nominal duplication. Take, for example, a subject like Geography¹. While courses in General Geography, arranged to fit one to become an investigator in this line, and given with only the scientific end in view, are offered in academic colleges, and are excellent in their results, these courses would need to be materially modified to give the best academic preparation for a teacher.

2. There are 14 purely academic courses, that is, courses not pertaining to teaching (10 per cent. of the total), aggregating 33 hours (10 per cent. of the total), offered in Teachers College. These are as follows:

French A and 1, *German A* and 2, *History A*, and *Mathematics A*—all offered for economical reasons, there being sufficient students to fill one or more sections of each. There are also *History 2* and 10, demanded by the number of teachers wishing these courses for high-school work; *Music 1*, a preliminary for the teachers' courses in music, and demanded for all kindergarten teachers; and the courses in *Physical Education*, which are so manifestly professional that, although offered in non-professional colleges, they must be given here.

It will, therefore, be seen that the only real duplication of work with Columbia and Barnard Colleges is necessitated by the size of the sections, and is as follows :

French A and 1 (6 hours). *History A* and 2 (6 hours).
German A and 2 (6 hours). *Mathematics A* (3 hours).

This is a total of 7 courses, 21 hours, or 5 per cent. of the total number of courses offered in Teachers College, and 6 per cent. of the total number of hours. It is evident, too, that the method of instruction in these courses is, by the nature of the aims of the students involved, quite different from that in non-professional colleges, although this point can hardly be made clear to the instructors to whom these classes are often left in such institutions.

Nevertheless, these subjects in group 2 might with no serious harm be handed over to Columbia and Barnard Colleges, if it were not for the economical question involved. If the university should cease to require subjects like *Mathematics A*, *German A*, and *History A*, the problem would be to quite an extent solved by the diminution in the size of classes.

3. The following is a summary of the courses offered at Teachers College :

	COURSES		HOURS	
	Number	Percentage	Number	Percentage
Purely educational.....	74	50	164	50
Education in fact, though not in name ...	58	40	131	40
Total.....	132	90	295	90
Purely academic, though not duplicating Columbia or Barnard Colleges	7	5	12	4
Duplicating such work.....	7	5	21	6
Grand total.....	146	100	328	100

It is evident that the above-outlined policy of Teachers College in regard to subject-matter courses calls into question the special fitness of the academic subjects in the customary college for those persons who are expecting to teach.

NATURE OF GENERAL AND SPECIAL COURSES IN EDUCATION—THEIR
RELATION TO EACH OTHER AND TO PRACTICE.

In the organization of Teachers Colleges a number of courses bearing on the general problems of education are provided, as well as special courses relating to the theory and practice of teaching in each of the separate departments represented.

The nature of the general courses is twofold: first, a number of courses that deal with the basic facts of child-life, fundamental educational principles and leading points in methods of teaching that are considered as essential elements in the work of all undergraduate students; and, secondly, a larger number of courses that consider more advanced problems of the educational philosophy, child-study, supervision, and school administration, and which are in general intended for senior and graduate work.

In the first group fall courses in the Elements of Psychology, Educational Psychology, the History and Principles of Education, and in General Method and Practice-Teaching, although the latter is a required course only for the students preparing for general teaching in the elementary school.

In the second group are courses in Educational Problems, Modern Educational Theory, School Administration, Child-Study, Genetic Psychology, Supervision, Critic Work and Experimental Teaching, and general courses on Secondary Education. In addition to these, seven "practica" and six seminar courses are offered for further graduate study. These latter courses call for research work and intensive study on special phases of general problems, and are open only to graduate students.

In the first group the course in the Elements of Psychology deals with the fundamental facts of mental life. While aiming at breadth and thoroughness, the needs of the prospective teacher are given prominence through the selection of topics of special pertinence, and by the use of illustrations from school life whenever possible.

The course in Educational Psychology aims to develop in students the power to apply the facts of psychology to the problems of teaching. Special study is made of the meaning of apperception, the problem of

attention, the relation of memory to knowing, the part played by imagery, the emotions and interests in child-life, the importance of habit, and the place of suggestion in teaching.

As a part of the course there is systematic observation of teaching in the Horace Mann School, during which the points previously considered are kept to the front. And besides that, a study is made of ten or more lessons from text-books, the good and the bad points being noted and the decisions justified.

These two courses, each a three-hour course for one-half year, are required of all students in the first year of the undergraduate two-year professional courses for the Bachelor's diplomas and degree in Education, and more than any other courses in the institution they are intended to furnish a basis for the specialized study of education in each department during the senior year and later.

The only required work in the senior year for all undergraduate professional courses is the History and Principles of Education.

The first portion of this course examines the ideals and character of education in oriental countries, in Greece and Rome, passing thence to the influence of the Middle Ages, and later to the conceptions and types of education developed at the time of the Renaissance and the Reformation. After this, the influence of the great educators of modern times—Rabelais, Montaigne, Milton, Locke, Rousseau, Basedow, Pestalozzi, Herbart, and Froebel—is analyzed, and their contributions to the present thought and practice are studied.

The psychological conception of education, as represented by Pestalozzi, Herbart, and Froebel, is contrasted with the sociological conception, as advanced by Spencer, and the influence of the latter idea on subject-matter is considered.

At the end of the course a study is made of contemporary conceptions of education, involving the nature and aim of Education, the institutional factors in the process, the subject-matter and method, and the organization and administration of education.

This is a three-hour course for one year, and, since the average student is expected to take fifteen hours of work per week, the proportionate time belonging to it is evident. Returns from 101 students who were taking this course last year show it, too, to have required possibly more than the average time for educational courses, namely, 1.96 hours of study for 1 hour in class.

Several important questions arise in regard to the relation of this

course to other requirements of students, particularly to those of students in the several technical departments of the college:

1. Is not the total amount of the time required for it out of proportion to the other work of the senior year?

2. Does it not devote too large an amount of students' time to the study of ancient educational ideals and practices, which have relatively small direct bearing on modern thought, and which lack vital suggestiveness and stimulating quality to students whose main interests are in the present problems of the methods courses?

If the reply is made that one important aim here is culture, is it not true that the devotion of a large amount of time to this early period for its culture value is out of place in the most strictly professional year of the undergraduate work? Also, may it not be true that as great breadth of view can be obtained from a more intensive study of problems that appear more vitally related to the student's outlook and experience?

On the other hand, is not too little time devoted to the more recent ideas of educational theory and practice, such as the ideas of unification and correlation in the course of study, the relation of school life to community life, the influence of vocational demands and conditions upon school work, the place of art and occupations in interpreting social life? In brief, how practical should a course in the history and principles of education plan to be?

These problems are too difficult to attempt to solve them at the present time, but since much the same questions arise in other institutions for the training of teachers, the hope may be here expressed that they will receive due attention in the near future.

The undergraduate special methods courses need no description at this point. Among the graduate courses the "practica" are of special interest because they aim primarily to teach the proper methods of investigating educational problems. It is true that ideas are still vague as to how the scientific method can be applied to the field of education, but it is certainly in place to undertake the task. The advance of the science of education is directly dependent upon the use of the scientific method, for otherwise the conclusions reached are only views, opinions, not fairly proved facts. The seminars are continuations of the "practica," their special purpose being the preparation of dissertations for the degree of Ph.D. A considerable portion of the advanced work, therefore, has for its distinctive

aim the teaching of right methods of investigation of educational problems.

PRACTICAL WORK.

The term "practical work" was finally hit upon in the search for a suitable name to cover the various kinds of practice, in distinction from theory, undertaken by students in the Horace Mann School and the Speyer School. Included among these kinds are:

Observation of a single child, a small group, or a class.

Instruction of a single child, a small group, or a class.

Preparation of materials for use of a class.

Examination of papers, collecting data for a class.

The observation or study of a school as a whole, its organization and discipline.

Any work that involves direct contact with children, or with their parents, or with the environment of both, for the purpose of influencing the school instruction, or for improving the condition of either, through educational means.

The practical work, therefore, finds its center in the government, instruction, and study of children, although it includes whatever neighborhood work is primarily educational. Thus the practical work in Teachers College includes far more than observation and practice-teaching, as these terms are commonly used in training schools for teachers.

The two schools used for practical work differ widely in their nature.

THE HORACE MANN SCHOOL.

The Horace Mann School, in a building connected with Teachers College, consists of a kindergarten (37 children), an elementary school of seven grades (424 children), and a high-school with a five-year course (430 students); the three departments together having 891 pupils. The number of teachers is 65. The tuition in the kindergarten is \$75 per year, which is gradually increased in the grades, until the amount per pupil in the high school is \$250.

The school is under the control of a superintendent, assisted by three principals, *i. e.*, of the high school, the elementary school, and the kindergarten. Thus the so-called "Horace Mann School" is really a system of schools, corresponding to a full city system, in miniature.

The numerous heads of departments in the college bring in an additional factor. These have always been active in determining the

Horace Mann School curriculum in their respective subjects, and in the selection of text-books, apparatus, etc. They also meet the teachers frequently, individually and in groups, for discussion of the work of the school. Yet their relation to the school in all these matters is advisory only, the superintendent and principals possessing the final authority to decide upon curriculum, text-books, etc. The reason for this arrangement is the conviction that specialists, no matter how competent and energetic, are unprepared to control the instruction in a school. Final responsibility must be centered in one person and his assistants, in order to secure a good curriculum and a fair degree of unity in other respects.

This arrangement, however, leaves it practically to the option of each department how much energy it shall expend in trying to better the school. It is the opinion of the undersigned that a faculty regulation, whereby each department shall put in writing its recommendations as to curriculum, text-books, method, etc., would effect an important improvement. If such a recommendation were expected to reach the superintendent of the school by a certain date each year, a positive responsibility would be placed upon each department. If, in addition, a brief reply to the main points, in writing, could be expected from the principals or superintendent of the school, a business relation between the two parties would be established which might prove very beneficial to all concerned.

Yet there is another need more important than this. Thus far the Horace Mann School has not been a center of interest for Teachers College as a whole. Each department bears a certain relation to the school, to be sure, but the many departments have failed to work *together* in the solution of the problems of instruction there. The result is that both the college and the school lose the benefit of a close contact between departments in the discussion of practical school questions. This means that the college fails to take advantage of its highest opportunity.

Whether this evil can ever be largely remedied is a question. The size of the city, which places the homes of members of the faculty ten to fifteen miles apart, makes it extremely difficult to bring many together for evening meetings. But, worse than that, the diverse interests of the departments render it difficult to find vital questions of common interest. For example, departments representing the kindergarten, elementary instruction, secondary instruction (such as

Latin, Physical Education, Music, and Handwork), college instruction (as History of Education), school administration, and child-study, cannot readily unite in the discussion of practical problems.

Possibly it is best not to attempt unity in such diversity. But it might, at least, be feasible for the departments to be grouped in two or more divisions; for instance, those interested primarily in elementary instruction constituting one group, and those interested in secondary instruction, another group. Each should have its own executive committee or chairman and its stated meetings, and the latter could well equal the library as a stimulus and source of suggestions.

The high tuition is partial explanation for the fact that the school is little used for practice-teaching, although some instruction is undertaken by students in each of the three departments. The absence of such practice, however, renders the school all the more valuable as a model for observation, which is its chief function.

There are at present twenty-three methods courses that make much use of the Horace Mann School for various kinds of practical work. They are given by sixteen departments in the college and average about fourteen students per class, with the exception of one required course that has two hundred members. One of these is a kindergarten course, one is a kindergarten and primary course combined, seven deal with elementary instruction alone, eight with secondary instruction, and six with both elementary and secondary teaching. Twenty of these are special methods courses, only three being general. These twenty-three courses average almost three hours per week for one year, and a little more than one-third of this time is spent in practical work in the Horace Mann School, the remainder being occupied in classroom instruction in the college. Several other education courses make some use of the Horace Mann School.

It is evident, from the above, that it is the policy of the college to have subject-matter and methods courses quite distinct from each other, although all departments would agree that a large amount of method is taught in the subject-matter courses. The idea prevails that there is a sufficient quantity of work pertaining to method to make it necessary to offer separate courses in that field.

Each of these professional courses has been developed independently by the department concerned. No extensive uniformity exists, therefore, or has been aimed at, although comparison of views has no doubt influenced every course materially. In general, it can be said,

however, that the students are divided into small groups, and each group is placed in charge of a regular teacher of the Horace Mann School. In case a methods class has very few students, they may constitute only one such group; but a class of twenty-five members might be divided into two or three divisions, and assigned to as many teachers, for practical work.

These teachers naturally have their preferences even in the primary department, and some degree of specialization is customary in the grammar grades, as well as in the high school. Each head of department, therefore, can without difficulty find satisfactory teachers particularly interested in his field among whom to divide the students in his methods courses. Notices of assignment and records of the same are all attended to by an administrative officer of the college, and the student's program must be arranged in this respect, as in others, at the beginning of the year.

From the time of receiving a group of students, the teacher in the Horace Mann School is the one primarily responsible for their welfare in this work. Indeed, the head of department concerned may seldom put in an appearance to see what the students are accomplishing, although this is the exception rather than the rule. But, on the other hand, it is the rule that the teachers having charge of students in any branch are intimately acquainted with the desires of the college department that they represent, and are in such sympathy with it that they are capable of acting as valuable assistants to it in the field of practice. Indeed, their very reliability offers a temptation to the heads of departments to leave with them the entire responsibility. It should be remembered, too, that the professors in the college are usually experienced teachers of children or of young people below college rank, and in conjunction with the teachers in the Horace Mann School have largely determined the present curriculum of the school. They are, therefore, capable of keeping in close touch with the practical work of their students, without seeing a large amount of it. The responsibility for accepting the practical work for college credit rests primarily with the teachers of the Horace Mann School. This is a serious responsibility, in addition to their other regular duties; but usually any one teacher has no more than one group of college students to supervise, and the cheerfulness with which, almost universally, this duty is undertaken is convincing proof of its worth to the teachers.

The requirements for the various diplomas and degrees are so

different that it is impossible to state exactly how much practical work a student takes. But, in general, each undergraduate student pursues at least one general methods course, and the undergraduate and graduate students alike pursue from one to four other methods courses, general and special. Ordinarily, therefore, a student cannot receive any kind of diploma with less than one hour per week, for one year, of practical work in the Horace Mann School, and it is the rule to take from two to three times that amount.

The observation work naturally finds its motive partly in the practice-teaching that is to follow; yet the time devoted to observation by the student is much greater than that devoted to actual teaching. In fact, the amount of instruction in the Horace Mann School given by a student does not, as a rule, exceed a half-dozen recitation periods, although there are numerous exceptions. The fact that the Speyer School is primarily the school for practice-teaching partly explains this, as does also the high tuition, already referred to. But, in addition, the faculty of Teachers College is practically unanimous in its hearty belief in the great value of observation, when preceded and accompanied by well-developed theory, and when the observation is tested in discussion by competent critics.

THE SPEYER SCHOOL.

The Speyer School, located eight blocks directly north of Teachers College, at 94 Lawrence street, is a free school entirely supported by, and under the control of, the College. The term "school" here, however, includes not only a school in the ordinary sense, but an organization for neighborhood work as well. The school proper consists at present of a kindergarten and six grades (160 children in all), the seventh and eighth grades to be added as the present sixth grade advances. The number of regular teachers is 7, besides an acting principal and several supervisors. The children are desired to represent average families in their home advantages, and have been chosen with this in view from those who have happened to offer themselves as pupils.

The neighborhood work is under the control of a director, who is assisted by three regularly employed assistants, besides twenty or thirty other workers, giving one or more hours per week each. The resident workers occupy the fifth floor of the building. The school and neighborhood work together keep the greater portion of the building occu-

ped throughout the day and evening. The "school," including these two kinds of work, is under the general supervision of two departments of the college, the department of school administration being responsible for all matters of business, and the department of elementary education for all matters strictly educational, such as curriculum, selection of text-books, etc. The other departments of the college have a decided influence on the school; indeed, in several cases, a very active share in its work; but their relation is only advisory, as at the Horace Mann School.

The school proper is primarily a school of practice and experiment. It is used mainly by college seniors and graduate students. A large percentage of the former are normal-school graduates, and many are experienced teachers. They undertake practice-teaching as a required part of their methods courses, and they find its chief value in the criticisms received. As a rule, they teach one branch of study for a month or more, after having observed a class long enough to become fairly well acquainted with the children and their work.

The graduate students who do work at the school are more numerous than the undergraduates. They get the benefit of criticism, as do the others; but that is not the main profit aimed at. Their work is usually of an experimental nature, although they sometimes act as supervisors and critics of other students. Most of such work, as most of the other practical work both at the Horace Mann and at the Speyer School, is immediately a part of some college course, the class-room discussion dealing with theory, and this practice aiming at the application of that theory. In connection with such courses, some topic bearing on the curriculum or on method may be selected that calls both for research in the library and for actual experiment in the Speyer School. For example, this year two students have chosen the problem of teaching children how to study history; one, the problem of primitive life in the first two grades; three, the possibility and feasibility of a much better kind of problem in arithmetic; one, the difficulties in the way of unifying the kindergarten and primary school, and the remedies for them. The last topic calls for library research and observation mainly, rather than practice-teaching. Whatever assistance can be gotten from any department is entirely admissible, but the student must have force enough to carry on his investigation in his own way, and reach safe conclusions of some sort from data that an outsider can appreciate. Valuable new knowledge is one thing aimed at, but a good method of

working on educational problems, approximating a scientific method, is not less important. Thus there are two values aimed at in such graduate work that are not expected for undergraduate students.

The neighborhood or settlement work has been begun by attempting to duplicate such work as is done in the better "Settlements" in cities. To this end classes in cooking, sewing, and dancing have been conducted in the afternoon; numerous clubs have been established for the evenings, devoting their time to exercises in the gymnasium, including the use of the bath, to manual work, to literature, to parliamentary law, home nursing, etc., and the library with two reading rooms, has been kept open at certain hours for the use of adults and children. In addition, a large number of children collect at the building on afternoons for games of various kinds, and for story-telling; and on certain evenings young people and adults meet there for social entertainment, including games, music, reading, and dancing in their program. Through these means as many as three hundred families are affected more or less, while the school proper reaches about one hundred and fifty other families, the two groups of families overlapping very little. Thus the neighborhood work supplements that of the school, so that the two together influence between four hundred and five hundred families in a community of perhaps 150,000 persons. And since the classes and clubs are conducted or supervised mainly by volunteer students from Columbia College as well as from Teachers College, the value to the university as a whole is apparent. Much of this volunteer work is no part of any course and receives no credit, being undertaken solely on account of a desire to engage in some form of social work.

The moment, however, one attempts to do considerably more than entertain children in a club for an hour or more—that is, the moment one undertakes to put such work on an educational plane—he is confronted with a most difficult problem. Proper discipline requires more judgment and successful appeals to interest demand more skill, than in the day school. Both subject-matter and method, must therefore, receive special attention. More originality and a more careful study of home habits, street life, etc., are demanded than in ordinary instruction. For such reasons this work may now also be accepted in Teachers College as practical work with credit for graduate students. For example, one student the present year has general charge of the manual training in the several boys' clubs; two together are in control of a club that

aims at the good oral reading and also telling of classic stories, dramas, etc.; one will soon undertake the instruction of a class of children defective in hearing; and one is responsible for teaching games and other kinds of entertainment to a class of fifteen-year old girls. All such work is peculiarly difficult and truly experimental, since neither the customs of the schools nor those of the settlements can be adopted. There is the assumption here, too, that social service is fully within the sphere of the duties of teachers in training, and experience of this sort will have a much-needed effect upon the common school.

As time passes an attempt will be made to modify this neighborhood work radically, and to bring it and the day school together. At present, although the two are conducted in the same building, they deal with different classes of people and have different aims, so that they are practically unrelated. In consequence, each is seriously defective. Anyone must admit that even the so-called good school of the present is a thoroughly theoretical institution, imparting a large amount of theory about how to live and exciting a good degree of interest, but not following up either to the point of use or practice. So it is with the Speyer School. The neighborhood work, on the other hand, is superficial and scattering, offering little of theory; in fact, trying to be practical on a meager quantity of thought.

If the two efforts could be united into a single work, something of far more value might be accomplished. Then the solution of probably the greatest modern educational problem would be undertaken, namely, the question: Is it possible for a school to be so conducted as to combine theory with practice abundantly? The first step toward a solution would consist in centering the attention of the teachers and neighborhood workers alike upon largely the same set of persons; that is, the children in the school and their parents. A few concrete examples will suggest the possibilities that might follow.

The fourth grade in the school recently planted some narcissus bulbs in a small flower garden out-of-doors, and afterward made some study of such bulbs. Suppose, in this connection, that the children were brought to realize that the long winter is before us, during which the coloring of vegetation can be little enjoyed, and that the narcissus bulb is a special means of securing beautiful flowers at the earliest possible moment in the spring. Suppose that it is also shown that thousands of persons in our city so hunger for such beauty during the cold season that they spend money for flowers, just as for bread, thus

supporting a florist's establishment every few blocks. Suppose, finally, that similar flower-producing bulbs are studied and associated with the narcissus, such as the hyacinth, tulip, jonquil, and tuberose. At this point school instruction must usually stop owing to pressure of other duties.

But the real fruitage of the learning is lost, unless other things are added. Awakened to a sense of the beauty and need of more color in winter, the children might be led to care for some house plants during this period. But what kinds, where obtained, where placed, and how cared for? Under guidance they might form the habit of visiting the florists occasionally for the purpose of seeing the variety of plants on hand, renewing the acquaintance with some, and *buying* some. The children even in the kindergarten have volunteered the information that they can "work" their fathers for pennies, if they ask for one at a time, and the first five cents spent by a child for flowers marks an epoch in his life much as when one's first book is purchased. Where, also, might some of these several kinds of bulbs be bought, how much would they cost, where and how might they be planted, and how should each be cared for? The school breaks down at such work as this because of a lack of helpers; and at this point it is proposed that the neighborhood workers come in to give assistance, following up each of these points to its execution.

But these workers might well, also, make demands on the school. In the course of their visits to the homes in the neighborhood they discover what newspapers and magazines, if any, are read, and to some extent how they are read. They make some observations on the topics of conversation at meal times, the furniture of the home, the sanitary conditions, the extent to which the families spend their evenings together, the behavior of older children toward their younger brothers and sisters and their parents, the games that are played, and other amusements. Conscious of the needs that these observations suggests, why should not these workers influence the teachers to instruct the older children about differences among newspapers, what the characteristics of the best ones are, what the best parts of a paper are, and how to read the various parts? Why should they not, likewise, expect the teachers to acquaint the children, and the parents through parents' meetings, with the faults of poor magazines, and the names of some of the best and cheapest, including some discussion as to how to read them? Why might they not further insist that more topics be included in the school

curriculum that would prove acceptable as topics of conversation at home, the teacher aiming to present these in such a manner that the children would be able to converse about them intelligently? Why not, in addition, suggest that the ability to tell a story and read well aloud be so developed—on classic subject-matter—that the ability may often prove the means of holding the members of a family together in the evening? The school already partly accomplishes these tasks. If it would go farther, the neighborhood workers could be of great assistance in carrying them to the end, in executing the theory offered by the school. In this manner the teachers and the neighborhood workers might well co-operate, each assisting the other and each asking assistance from the other.

The problem involved calls into question the *nature of the school*. So much of what is taught there is never followed up to the point of execution, is not made to meet real needs, even when it might well meet them. And so much of what is taught is quite unrelated to real needs, to life! It is no wonder that many persons doubt the possibility of making the school strongly practical as well as theoretical. If a number of experimental stations, such as the Speyer School, would work energetically on this problem, a different faith might come into being. It would take a larger force of teachers to conduct a school that actually applied a fair part of the knowledge that it presented, but the public would finally be far more willing to employ a larger number. There are many indications that the school of the future will combine many of the characteristics of the present public school with those of the present settlement work, being perhaps a sort of cross between the two. It is the purpose, at least, to strive in this direction in the Speyer School, and to call upon graduate students to share in such work, whether they undertake "practical work" in the school proper or in the other branches of the institution. Gradually the two must become one, if the educational theory of the college finds realization in the school.

In conclusion, it is impossible to determine from the preceding statements just how much observation, practice-teaching, or other practical work is required from students of Teachers College. It should be remembered that this is due to the great variety of purpose and advancement of the students. It is at least a question whether college graduates who have taught for a number of years, and who are now specializing in the history of education or child-study, should be

required to do any practice-teaching whatever. And it is evident that others should do more or less of such work, according to their past training and present object. But, on the other hand, any student who wishes to specialize to a considerable extent in practical work in the "elementary" school can do so to his heart's content at Teachers College. The two schools offer ample facilities at present. When it comes to secondary work, however, this is unfortunately not yet the case.

PLANS OF RECITATIONS.

There is a general agreement among the departments of the college that written plans for recitations are an essential element in the training of teachers. But the nature of such plans has been differently conceived by the various instructors, so that students taking a methods course under one professor have made out one kind of plan, and taking such a course under another have followed a different scheme. This lack of harmony has led to much confusion and loss of time. It has seemed important, therefore, that some agreement be reached as to the main characteristics of these plans. Following is a typical plan, taken from Manual Training, whose *form* has been agreed upon as acceptable by about half of the departments of the college. Quite possibly it will prove acceptable to the remainder when opportunity has been found for its careful consideration.

LESSON PLAN FOR MAKING A SAILBOAT—FIFTH GRADE.

PREPARED BY DR. E. B. KENT.

Teacher's aim.—To make a sailboat which shall have value for the children as a toy, and thereby to determine some fundamental principles of boat construction. Illustrations of these principles are to be observed at the One Hundred and Twenty-ninth street piers.

Children's aim.—To make a sailboat.

SUBJECT-MATTER.

A. *The hull.*

1. It must float; *i. e.*, be lighter than equal bulk of water.
Advantages of wood, paper, etc.
How iron may be used.

METHOD.

- How many of you have made sailboats?
What difficulties, if any, did you meet in making them? In sailing them?
We shall try to avoid these.
What shall we make first?
1. What is the most important point to look out for in making the hull?
What, then, are good materials?
But are not steamships built of iron?
Why do they float? Illustrate with a cup.

SUBJECT-MATTER.

Hollowness, rather than lightness of material, keeps most boats afloat.

Wood best for our purpose because it will float without being hollowed.

2. Form.

- a) Must be such as to allow the greatest speed.

Sharpening the prow will increase speed.

Length of point, 3"—4".

- b) Must be such as to sail straight; i. e., bi-symmetrical.

Prow must be in middle of end.
Slant must be the same on both sides.

Use of chisel.

Advantage of making the cuts parallel to the line.

- c) Other details of form affecting speed.

All splashing by the boat is wasted energy.

Occurs at corners.

Bottom to be rounded with plane or knife.

Stern cut to semicircle, and made to slant upward from keel.

B. *Motive power.*

1. Mast.

The larger the sail, the more power.

METHOD.

What, then, has lightness of material to do with keeping the ordinary boat afloat?

Best material for us to use?

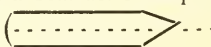
2.

- a) Why not use these blocks just as they are (1" × 2" × 10") for our hulls?

Why make them pointed?

How long shall the point be?

- b) In planning the point, we must think of something else besides speed.

How would a boat act if shaped like this?  (top view).

How, then, must we plan the point?
Draw lines for point.

What tool shall we cut them with?
Who can show us how to use it?
(*Class begins work.*)

- c) Is there anything else which we may do to the hull to increase the speed?

The point increases speed because it reduces the splashing of the boat—saves the water from turning sharp corners.

At what other points will there be splashing and disturbance of water?

How remedy this?

Process treated as above.

How describe a good hull?
(*Work.*)

What shall we do next?

How tall a mast?

SUBJECT-MATTER.	METHOD.
The size of sail is limited by the height of the mast.	Why so tall?
The height of the mast is limited by the stability of hull.	Why not taller?
Consequences of too high a mast.	
2. Ballast.	
Steadies boat and so allows increased sail area.	Can we do anything to the hull which will enable it to carry more mast and sail without capsizing?
Freight ships depend on their cargo for ballast.	Is this done with real boats? How?
Racing yachts have a deep-reaching metal keel.	
Use of large nail as ballast.	In what two ways could you use this spike as ballast for your boat?
a) As common keel, fastened to bottom of boat with staples. Better for use in shallow water.	Advantages of each? (<i>Work.</i>)
b) As "fin" keel, by driving perpendicularly into bottom of boat. Much steadier, but requires deep water.	
Best height for mast.	Now, once more, how tall shall we make the mast?
Determined by experiment at sink or in pail of water. Allow something for weight of sail.	How find out? Only by trying. Begin with a mast you are sure is tall enough and cut it down till boat behaves properly in water.
A mast should taper to give maximum of strength and lightness respectively where each is most needed.	What is the proper shape for a mast? Why?
Process.	
1) Bore $\frac{1}{4}$ " hole through boat 1" or 2" forward of center.	What shall we do first in making the mast? Why? What next? Why? etc.
2) Split a long piece from a $\frac{1}{4}$ " board and fit to boat.	
3) Test in water and cut off at top till boat becomes steady.	
4) Cut off about $\frac{1}{8}$ more to allow for weight of sail.	
5) Taper mast using plane or knife.	
6) Split the lower end of mast, insert in hole, and secure by driving wooden wedge into the split.	

SUBJECT-MATTER.

METHOD.

3. Sail.

a) Size—as high as mast will allow and almost as broad at bottom.

What shape and size of sail shall we use?

b) Shapes.

(1) Common, four sided; gives largest surface.

Advantages of the different shapes.

(2) Triangular, or "leg of mutton;" less surface, but more easily made and rigged.

c) Spreading.

Use of boom, gaff, hoisting-line.

How kept spread?

Loops for attaching to mast.

Hems for holding boom and gaff.

Process.

Cut sail.

Cut paper pattern just the shape and size you wish your sail to be.

Make hems.

Cut from cloth, allowing enough for the hems.

Attach mast-loops and hoisting-line.

Insert spars.

Now, what do you think are the two most important things to look out for in making a sail?

Make small hole in top of mast and pass hoisting-line through it.

C. *Means of steering.*

Necessity of rudder.

Does the boat need anything else? How are boats steered?

It tends to push the stern of the boat away from the side toward which it is turned.

A sailboat cannot be steered very much by the rudder alone. The slant of the sail must often be changed too, and this we cannot do on our boat. Still we shall need a rudder to hold the stern in place, and thus make the boat point always with the wind instead of turning around and around.

On a sailboat, is the steering done entirely by the rudder?

(Possibly discuss tacking and explain how a boat may sail almost into the wind.)

(State facts opposite.)

Making a rudder.

What shall be the shape of the rudder?

Surface about $1\frac{1}{2}$ " square.

How large?

Fitted to hole in stern.

How attached?

Conclude with excursion to the One Hundred and Twenty-ninth street piers. Study the adaptation of the different types there seen to their various purposes, and explain in this way the larger differences in form, speed, motive power, etc.

The first characteristic of this plan is that it has two parts, subject-matter and method, that are quite distinct from each other. The primary reason for this separation is that poor teaching is as often due to lack of digestion of subject-matter as to bad method; and when the subject-matter is not placed entirely by itself it is difficult to see how poorly it has been organized or how meager it is in content. And since it is necessary to think subject-matter through, independently of method, indeed *before* method has been considered, the former is placed on the left.

The method of presenting any portion of the subject-matter is found immediately to the right in the method column—a plan that can be followed in most cases, though not in all.

The method of presentation is shown in direct discourse because, when the recitation is finally being conducted, the thought of the teacher must take that form. This characteristic, also, cannot belong to all recitations, although it can to a great part of them.

The paragraphing and indentation, both in subject-matter and method, are intended to reveal the relative values of facts and remarks, a matter of the utmost importance in teaching. Only when relative values are thus clearly foreseen by the teacher are they likely to be appreciated by the learner.

There is no opposition between the Herbartian “formal steps” and the form of plan here suggested. In fact, they merely supplement each other; the “formal steps” indicate the main steps in the inductive-deductive movement, and this form of plan merely suggests other thoughts *besides those* that might well be guides when one is preparing lesson plans.

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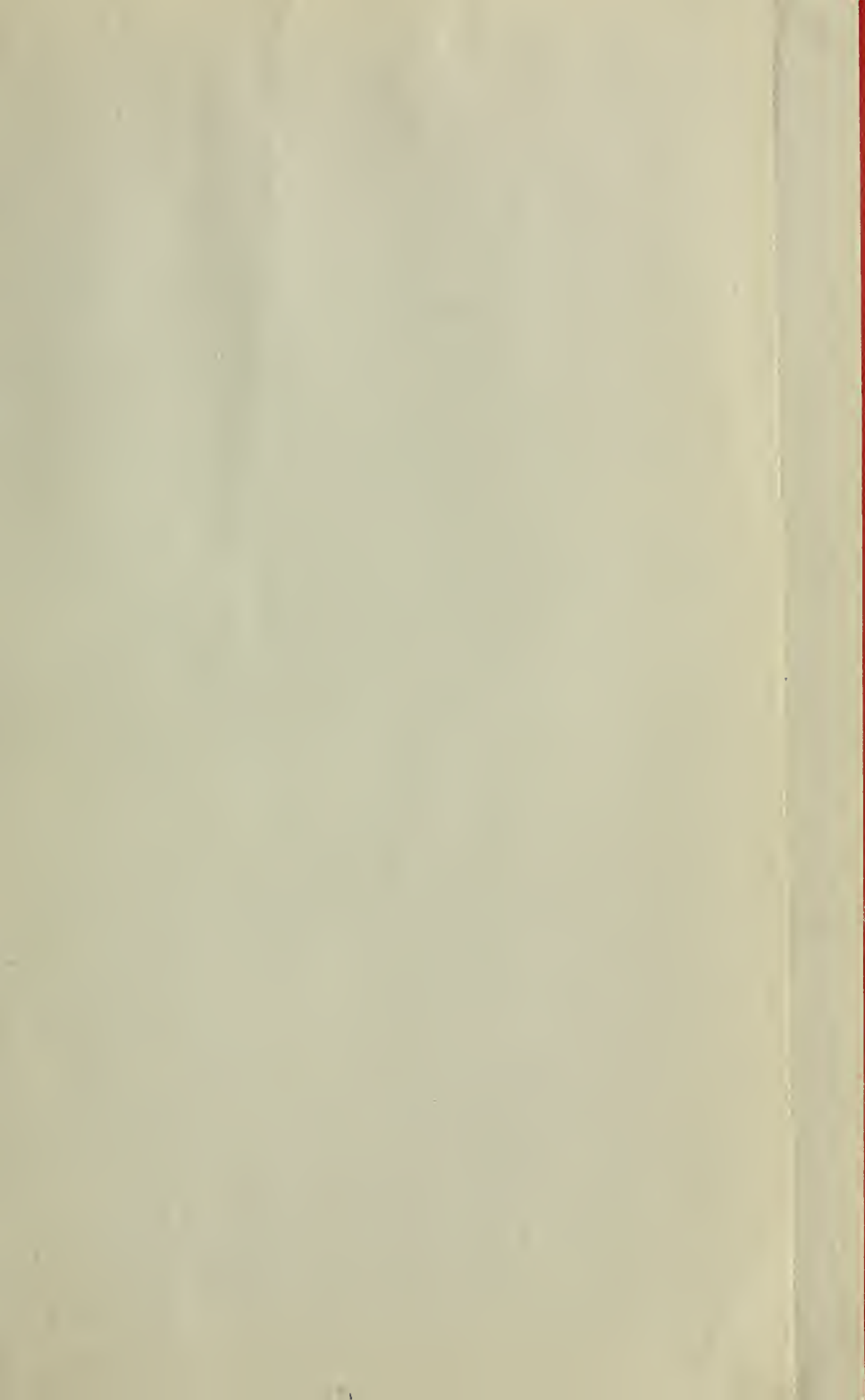
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